ADDENDUM NO. 1

PROJECT NAME: **Huebner Creek Greenway Hike and Bike Trail Extension – BID #2026-01 (CSJ 0915-12-735)**

DATE: **January 27, 2026**

This addendum should be included in and be considered part of the plans and specifications for the name of the project. The contractor shall be required to sign an acknowledgment of the receipt of this addendum and submit it with their bid.

Addendum No. 1 is issued to notify, add, change and replace the following:

I. General Clarifications:

1. The estimate for the project is $1,300,000.
2. The project final completion was updated to 190 calendar days from notice to proceed.
3. The City of Leon Valley's liquidated damages penalty of $500 per day on page 106 of the contract documents was revised to $700 per day to coincide with TxDOT's schedule of liquidated damages from page 176 of the contract documents.
4. Ardurra will be acting as the Construction Manager on behalf of the City of Leon Valley.
5. The project's pedestrian bridge is the major constraint since it is a prefabricated bridge. The construction and delivery can take approximately 5 months to be completed. This will be the critical path of the project.
6. Limits and location of the temporary sidewalk have been added to the plans.
7. Concrete riprap detail was added to the plans.
8. The City of Leon Valley construction permit fees will be waived for this project.
9. The Base Price Unit Tab in the contract documents was updated to match the plans and specifications in this addendum.
10. The project will be seeded with hydrolmulch, there will be no sodding.
11. Geotechnical report for the project has been added to this addendum.
12. The sign-in sheet and agenda for the January 26, 2026 Non-mandatory Pre-bid Meeting has been included with this addendum.

II. Questions:

1. What is the estimated cost range?
    a. The estimated cost is $1,300,000.
2. Due to the Bridge manufacturing lead time will the project be considered Substantially Complete without the bridge installed?
    a. Project will be substantially complete once the pedestrian bridge is installed.
    b. Addendum #1 will edit the contract time to 190 days. Substantial completion will be 160 days from notice to proceed, and final closeout will be 190 days from notice to proceed.
3. Can you please clarify if and when traffic control will be needed? The details and the plans are vague and unclear.

a. This is being clarified with Addendum #1. TCP will be required for work on the Evers Rd tie-ins with a one lane road closure.

4. Will a temporary aggregate sidewalk be required for the full length of the project?
   a. There is approxamately 800 LF of temporary sidewalk in Rimkus park. Addendum #1 will include an approximate alignment and Item 247-Flexible Base pay item is being added to plans and bid documents.

5. The plans state seeding and permanent sodding. Can you please clarify which will be required?
   a. Sodding references will be removed in Addendum #1. Seeding will be done with hydromulch.

6. Who has produced the Trailhead signs for The City of Leon Valley previously?
   a. The company that did the graphic signs for the trailhead signs and monument markers on the first segment of the trail was iZone Imaging.

7. Will the contractor need to provide the testing for the concrete pours and other civil testing required?
   a. The City of Leon Valley will have testing done for all of the sidewalk, structural, and miscellaneous concrete. We recommend that contractors have their own independent laboratory for quality assurance.

8. The quantity of remove concrete does not seem to account for any of the concrete removal required at the Bandera Road bridge, please verify.
   a. Concrete removal at Bandera bridge is subsidiary to the COLV specification 1002-Concrete Sidewalk and additional concrete removal is subsidiary to Item 100 - Preparing ROW. The pay item for remove concrete is for portions of the existing concrete trail that need to be removed outside of the proposed trail ROW shown in the typical sections.

9. Please provide a detail for the concrete riprap class a, thickness, toe walls, reinforcing.
   a. Detail is being added in Addendum #1.

10. After walking the trail, we notice that the trees have been tagged, is there a tree plan showing which trees are to remain?
   a. Tagged trees are for the Huebner Creek drainage project.

11. Please verify the CL A CONC(MISC)(LANDSCAPE AMENITY), out take off shows 3cy.
   a. Quantity is for the concrete footings for the trailhead signs and direction monuments.

12. Please provide the finish of the bridge. - Painted or Weathered?
   a. The City wants the bridge to have a weathered finish.

13. Can more detail be provided as to what needs to be removed and the construction activity that is to take place below the Bandera Bridge?
   a. Existing concrete riprap will be removed to construct the proposed trail to a 1% cross slope. See design cross sections on page 43 of the plan set.

14. What is the spacing for the mile markers, and do you have the signage designs available?
   a. The spacing and design for the trailhead signs and monument markers will be provided by the City of Leon Valley. Sample designs are being added to the specifications in the construction documents for bidding purposes.

15. What is the required distance to clear outward from the trail?
   a. It varies and was identified as the ROW width in the typical sections for the proposed trail.

16. Will sod or seed be required, and if so, what type?
    a. Sodding references will be removed in Addendum #1. Seeding will be done with hydromulch.
17. Do we need to verify the location of any water lines within the park?
    a. Utility layouts show locations of the water lines in the park. See General Note 10 on sheet 3 of the plan set.
18. Will the existing asphalt within the park be removed (1,571 LF at 8' wide)?
    a. Existing trail removal is subsidiary to the COLV specification 1002-Concrete Sidewalk and additional trail removal is subsidiary to Item 100 - Preparing ROW for the ROW widths shown in the typical sections. The pay item for remove concrete will be used for portions of the existing trail that need to be removed outside of the proposed trail ROW shown in the typical sections.
19. Will silt fence or hay rolls be required?
    a. Temporary sediment control fence is called out in the SW3P plans and pay items.
20. What do we need to provide to allow you to review if they are an acceptable equivalent?
    a. When submitting shop drawing, please verify that the design loads and bridge dimensions are equivalent to those of the Wheeler bridge shown in the plans.
21. Please provide geotechnical report.
    a. Geotechnical report will be included in Addendum #1.
22. For the installation of the bridge, will the access be the responsibility of the contractor, or will the city provide access to Crane, Trucking, etc, and for the disturb area, are we to hydro mulch what we disturb?
    a. Access will be the responsibility of the contractor. Disturbed areas by the contractor that are not in the ROW area shown in the typical sections will requre revegetation by the contractor at their expense. A seeding or sodding alternative, with a watering schedule, can be proposed in lieu of hydromulch for these non-pay items/areas. A request for information (RFI) and construction submittal will need to be submitted to the City of Leon Valley for review and approval during the construction phase.

III. Plans and Contract Documents:

1. Remove and replace Page 1 (cover page) of Contract Document for Addendum 1 Revisions
2. Remove and replace Page 5 of Contract Document to add TxDOT Item 247 – Flexible Base, for the temporary sidewalk and corrected SS1003-COLV specification name.
3. Remove and replace Page 85 of Contract Document to add TxDOT Item 247 – Flexible Base to bid tabs for the temporary sidewalk.
4. Remove and replace Page 96 of Contract Document to revise the days for substantial and final completion in Section 4.2 of the City of Leon Valley's document.
5. Remove and replace Page 106 of Contract Document to revise the liquidated damages to $700 per day in Section 6.3 of the City of Leon Valley's document to match the TxDOT's Schedule of Liquidated Damages on page 176 of contract documents.
6. Remove and replace Page 176 of Contract Document to revise the number of days for the contract time on TxDOT's Schedule of Liquidated Damages.

7. Add Pages 206A-206G to the Contract Document to include TxDOT Item 247-Flexible Base specification for the temporary sidewalk.
8. Add Page 277A to the Contract Document to include the example design for the Trailhead Sign (SS1003-COLV)
9. Add Page 278A to the Contract Document to include the example design for the Direction Monument (SS1004-COLV)
10. Remove and replace Page 2 of the Plan Set to add TCP (2-4)-18 standard to the Sheet Index.
11. Remove and replace Page 14 of the Plan Set to include Item 247-Flexible Base to the Summary Sheet.
12. Remove and replace Page 16 of the Plan Set to edit notes to remove sodding references and include application of TCP on Evers Rd.
13. Remove and Replace Pages 17, 18, and 19 of the Plan Set to add location of temporary sidewalk.
14. Add Page 31a to the Plan Set to include TxDOT Standard TCP(2-4)-18.
15. Remove and replace Page 42 of the Plan Set to include the Concrete Riprap Detail.
16. Remove and replace Page 55 of the Plan Set to revise the permanent soil stabilization from sodding to seeding.

Attachments:

a) Addendum Acknowledgment Form (1 Page)
b) Pre-Bid Meeting Agenda and Sign-In Sheet (2 Pages)
c) Pages 1 (cover page), 5, 85, 96, 106, 176, 206A-206G, 277A, and 278A of Contract Documents (15 Pages)
d) Index of Sheets, plan set page 2 (1 Page)
e) Summary Sheet, plan set page 14 (1 Page)
f) Traffic Control Plan Sequence of Work, plan set page 16 (1 page)
g) Construction Phase Layouts, plan set pages 17, 18, and 19 (3 pages)
h) TCP(2-4)-18, plan set page 31a (1 page)
i) Trail Details, plan set page 42 (1 page)
j) Storm Water Pollution Prevention Plan, plan set page 55 (1 page)
k) Geotechnical Report by Rock Engineering (20 pages)

Total Pages Addendum No. 1: (47 Pages)

END OF ADDENDUM No. 1

Note: Addenda Acknowledgement Form for Addendum No. 1 is attached herein. This form must be signed and submitted with the bid package.

RECEIPT OF ADDENDUM NUMBER(S) **1** IS HEREBY ACKNOWLEDGED FOR PLANS AND SPECIFICATIONS FOR CONSTRUCTION OF **HUEBNER CREEK GREENWAY HIKE AND BIKE TRAIL EXTENSION– BID #2026-01**

FOR WHICH BIDS WILL BE PUBLICALLY OPENED ON **FRIDAY, JANUARY 30, 2026 AT 2:00 P.M.**

THIS ACKNOWLEDGEMENT MUST BE SIGNED AND RETURNED WITH THE BID PACKAGE.

Company Name: _____
Address: _____
City/State/Zip Code: _____
Date: _____

_____
Signature

_____
Print Name/Title

Huebner Creek Greenway Hike and Bike Trail Extension
BID #2026-01
Pre-Bid Meeting Agenda
January 26, 2026
2:00 PM

Project Overview:

Base Bid: Construct a 10-foot-wide hike and bike trail from Bandera Rd (SH 16) to Evers Rd with the installation of the 70-ft pedestrian bridge, trailhead signs, direction monuments, and hydromulch for vegetation.

General Discussion:

- Project estimate is $1,300,000.
- Construction Phasing and Traffic Control Plan in accordance with TxDOT. It will only be required for temporary sidewalk guidance and a lane closure Evers Rd for the trail work.
- Provide access to the residents at all times.
- All technical questions/comments must be submitted to Ricardo Zamora, PE, Ardurra Group, Inc. at rzamora@ardurra.com
- Addenda will be posted to the City of Leon Valley website: https://www.leonvalleytexas.gov/rfps , on Public Purchase at www.publicpurchase.com, and CIVCAST at www.civcastusa.com

Important Dates:

- Friday - January 30, 2026 at 2:00 PM
  - Bids are due to the City of Leon Valley Puchasing Agent at 6400 El Verde, Leon Valley, Texas 78238 **by 2:00 PM CST** and will be opened publicly and read aloud at approximately **2:00 PM CST.**
  - Each bid must be accompanied by a cashier's check, certified check, or bid bond in an amount not less than **5%** of the total bid price
- Substantial Completion is within 160 calendar days from Notice to Proceed.
- Final Completion is 190 calendar days from Notice to Proceed.
- Liquidated Damages: ~~$500.00~~ $700.00 for each calendar day over the allotted time.

LEON VALLEY
DEEP ROOTS. BIG IDEAS.

Huebner Creek Greenway Hike and Bike Trail Extension
Bid #2026-01
Pre-Bid Meeting
January 26, 2026 @ 2:00 PM

Name	Company	Phone Number	Email Address
Ricardo Zamora	Ardurra	210-822-2232	rzamora@ardurra.com
David Dinkline	City of Leon Valley	210-681-1232	d.dinkline@leonvalleytexas.gov
James Tennant	Jordan Enterprises	210-590-1116	james@jordanlp.com
Taylor Augustyn	Underground Services	210-828-9896	taugustyn@softdig.com
Javier Rivas	TCL Construction	210-803-9249	javier.rivas@tclconstructionllc.com
Venancio Lopez	Millis Development	512-507-0227	vlopez@millis.com
Jose Diaz	Platinum Paving	830-941-6769	Jose.Diaz@connectservicesolutions.com

CITY OF LEON VALLEY
BID #2026-01
CSJ 0915-12-735

HUEBNER CREEK GREENWAY HIKE AND BIKE TRAIL EXTENSION

CITY MANAGER

CRYSTAL CALDERA

DIRECTOR OF PUBLIC WORKS

MELINDA MORITZ

ASSISTANT DIRECTOR OF PUBLIC WORKS

DAVID DIMALINE

ARDURRA

TBPE FIRM NO. F-10053
8918 Tesoro Drive, Suite 401
San Antonio, Texas 78217
Ph: (210) 822-2232 Fax: (210) 822-4032

STATE OF TEXAS
RICARDO J ZAMORA
94752
LICENSED
PROFESSIONAL ENGINEER
1/27/2026

1 Updated for Addendum 1
Revisions

JANUARY 2026

CONTROL: 0915-12-735
PROJECT: Huebner Creek Greenway
Hike & Bike Trail Extension
HIGHWAY: n/a
COUNTY: BEXAR

TEXAS DEPARTMENT OF TRANSPORTATION

LIST OF GOVERNING SPECIFICATIONS AND SPECIAL PROVISIONS

All Specifications and Special Provisions applicable to this project are identified as follows:

Standard Specifications: Adopted by the Texas Department of Transportation 2024.

Items 1L to 9L Incl., General Requirements and Covenants
Item 100 Preparing Right of Way
Item 104 Removing Concrete
Item 110 Excavation
Item 132 Embankment
Item 160 Topsoil
Item 162 Sodding for Erosion Control
1 Item 168 Vegetative Watering
Item 247 Flexible Base
Item 400 Excavation and Backfill for Structures
Item 403 Temporary Special Shoring
Item 416 Drilled Shaft Foundations
Item 420 Concrete Substructures
Item 423 Retaining Walls
Item 432 Riprap
Item 441 Steel Structures
Item 442 Metal for Structures
Item 447 Structural Bolting
Item 448 Structural Field Welding
Item 500 Mobilization
Item 502 Barricades, Signs and Traffic Handling
Item 506 Temporary Erosion, Sedimentation, and Environmental Controls
Item 4000 Prefabricated Pedestrian Steel Truss Bridge Span

City of Leon Valley Specifications:

1 SS1002-COLV Concrete Sidewalks (5") (104,360,420,421,440,530)
SS1003-COLV Landscape Amenity (Trailhead Sign)
SS1004-COLV Landscape Amenity (Direction Monument)

1 Addendum 1 Revision

ITEM	DESCRIPTION	QTY	UNITS	UNIT PRICE	TOTAL PRICE
162 7002	HYDRO-MULCH	4332	SY	$	$

Price/SY dollars _____

and _____ cents

Total Price dollars _____

and _____ cents

ITEM	DESCRIPTION	QTY	UNITS	UNIT PRICE	TOTAL PRICE
168 7001	VEGETATIVE WATERING	68	MG	$	$

Price/MG dollars _____

and _____ cents

Total Price dollars _____

and _____ cents

1

ITEM	DESCRIPTION	QTY	UNITS	UNIT PRICE	TOTAL PRICE
247 7021	FL BS (CMP IN PLC) (TY A GR 1-2) (4")	350	SY	$	$

Price/SY dollars _____

and _____ cents

Total Price dollars _____

and _____ cents

1 Addendum 1 Revision

ATTACHMENT D STANDARD FORM OF AGREEMENT

BETWEEN OWNER AND CONTRACTOR
ON THE BASIS OF A STIPULATED PRICE

THIS AGREEMENT is by and between the City of Leon Valley (hereinafter called OWNER) and _____(hereinafter called CONTRACTOR).

OWNER and CONTRACTOR, in consideration of the mutual covenants hereinafter set forth, agree as follows:

1 - WORK

1.1 CONTRACTOR shall complete all work as specified or indicated in the Contract Documents. The Work is generally described as follows: **BID #2026-01 HUEBNER CREEK GREENWAY HIKE AND BIKE TRAIL EXTENSION**

2 - THE PROJECT

2.1 The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows:

2.1.1 Base Bid: Construct a 10-foot-wide hike and bike trail along Huebner Onion Natural area and Rimkus Park from SH 16 (Bandera Rd.) to Evers Rd.. Install amenities and a 70 ft span prefabricated pedestrian bridge across Huebner Creek.

3 - OWNER

3.1 The Project has been designed by OWNER.

4 - CONTRACT TIMES

4.1 Time is of the Essence

All time limits for Substantial Completion and completion, and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

1

4.2 Dates for Substantial Completion and Final Payment
The Work will be substantially completed within 160 days after issuance of a Notice to Proceed and completed and ready for final payment within 190 days after the issuance of a Notice to Proceed.

5 - CONTRACT PRICE

5.1 OWNER shall pay CONTRACTOR for completion of the Work in accordance with the Contract Documents an amount in current funds equal to the sum of the amounts determined below:

5. If the Surety does not proceed as provided with reasonable promptness, the Surety shall be deemed to be in default on this Bond fifteen days after receipt of an additional written notice from the OWNER to the Surety demanding that the Surety perform its obligations under this Bond, and the OWNER shall be entitled to enforce any remedy available to the OWNER. If the Surety proceeds as provided and the OWNER refuses the payment tendered or the Surety has denied liability, in whole or in part, without further notice the OWNER shall be entitled to enforce any remedy available to the OWNER.

6. After the OWNER has terminated the CONTRACTOR's right to complete the Contract, and if the Surety elects to act under paragraph above, then the responsibilities of the Surety to the OWNER shall not be greater than those of the CONTRACTOR under the Contract, and the responsibilities of the OWNER to the Surety shall not be greater than those of the OWNER under the Contract. To a limit of the amount of this Bond, but subject to commitment by the OWNER of the Balance of the Contract Price to mitigation of costs and damages on the Contract, the Surety is obligated without duplication for:

6.1. The responsibilities of the CONTRACTOR for correction of defective Work and completion of the Contract;

6.2. Additional legal, design professional and delay costs resulting from the CONTRACTOR's Default, and resulting from the actions or failure to act of the Surety; and

1

6.3. Liquidated damages will be $700.00 PER DAY caused by delayed performance or non-performance of the CONTRACTOR.

7. The Surety shall not be liable to the OWNER or others for obligations of the CONTRACTOR that are unrelated to the Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the OWNER or its heirs, executors, administrators, or successors.

8. The Surety hereby waives notice of any change, including changes of time, to the Contract or to related subcontracts, purchase orders and other obligations.

9. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the Work or part of the Work is located and shall be instituted within two years after CONTRACTOR Default or within two years after the CONTRACTOR ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

10. Notice to the Surety, the OWNER or the CONTRACTOR shall be mailed or delivered to the address shown on the signature page.

11. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the Contract was be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted here from and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

12. Definitions.

12.1 Balance of the Contract Price: The total amount payable by the OWNER to the CONTRACTOR under the Contract after all proper adjustments have been made, including allowance to the CONTRACTOR of any amounts received or to be received by the OWNER in settlement of insurance or other Claims for damages to which the

Special Provision to Item 000
Schedule of Liquidated Damages

1

Project: **Huebner Creek Greenway Hike and Bike Trail Extension**

The Contract Performance for this project shall be **One hundred and ninety (190) calendar days** defined in the Specifications under General Provisions, Division C, Section 1.

The time set forth in the proposal for the completion of the work is an essential element of the Contract. For each day under the conditions described in the preceding Paragraph that any work shall remain uncompleted after the expiration of the days specified in the Contract, together with any additional days allowed, the amount per day given in the following schedule will be deducted from the money due or to become due the Contractor, as liquidated damages for late completion of the specified work.

FOR AMOUNT OF CONTRACT		
From More Than	**To and Including**	**Amount of Penalty Per Day over Contract Time**
$0	$100,000	$200
100,000	500,000	400
500,000	1,000,000	550
1,000,000	2,000,000	700
2,000,000	5,000,000	850
5,000,000	10,000,000	1,200
10,000,000	15,000,000	1,500
15,000,000	20,000,000	1,700
20,000,000	Over 20,000,000	2,500

1 Addendum 1 Revision

03/2024

Item 247
Flexible Base

1. DESCRIPTION

Construct a foundation course composed of flexible base.

2. MATERIALS

Furnish uncontaminated materials of uniform quality that meet the requirements of the plans and specifications. Notify the Engineer of the proposed material sources and of changes to material sources. The Engineer may sample and test project materials at any time before compaction throughout the duration of the project to assure specification compliance.

2.1. **Aggregate**. Furnish aggregate of the type and grade shown on the plans and meeting the requirements shown in Table 1. Each source must meet Table 1 requirements for liquid limit, plasticity index, and wet ball mill for the grade specified. Do not use additives, such as but not limited to lime, cement, or fly ash to modify aggregates to meet the requirements of Table 1, unless shown on the plans.

Unless otherwise shown on the plans, the unconfined compressive strength is waived when the flexible base material meets the #200 sieve requirement. When the #200 sieve requirement does not meet the specification in Table 1, the unconfined compressive strength is required.

Table 1
Material Requirements

Property	Test Method	Grade 1–2[3]	Grade 3	Grade 4	Grade 5
Master gradation sieve size (cumulative % retained)	Tex-110-E			As shown on the plans	
2-1/2"		0	0		0
1-3/4"		0–10	0–10		0–5
7/8"		10–35	–		10–35
3/8"		30–65	–		35–65
#4		45–75	45–75		45–75
#40		65–90	50–85		70–90
#200[1, 2]		85–95	–		–
Liquid limit, % Max	Tex-104-E	40	40		35
Plasticity index, Max	Tex-106-E	10	12		10
Plasticity index, Min		As shown on the plans	As shown on the plans		As shown on the plans
Wet ball mill, % Max	Tex-116-E	40	–		40
Wet ball mill, % Max increase passing the #40 sieve		20	–		20
Min compressive strength[2], psi	Tex-117-E				
lateral pressure 0 psi		35	–		–
lateral pressure 3 psi		–	–		90
lateral pressure 15 psi		175	–		175

1. The #200 sieve test is only required to meet the waiver of the unconfined compressive strength requirement. The #200 sieve test requirement is only applicable to stockpile samples from Section 247.2.4.
2. Compressive strength and #200 sieve test requirements are waived when the flexible base is mixed with or without existing material and treated with cement, emulsion, foamed asphalt, or lime, unless otherwise shown on the plans.
3. Grade 3 may be substituted for Grade 1–2 or Grade 5 when the flexible base is mixed with or without existing material and treated with cement, emulsion, foamed asphalt, or lime, as approved. The Grade 3 flexible base must meet the wet ball mill requirements of Grade 1–2 or Grade 5 as applicable.

1 Addendum 1 - Sheet Added

2.1.1. **Material Tolerances**. The Engineer may accept material if no more than one of the five most recent gradation tests has an individual sieve outside the specified limits of the gradation. This allowance does not apply to the #200 sieve requirement.

The Engineer may accept material if no more than one of the five most recent liquid limit or plasticity index tests is outside the specified limit. No single failing liquid limit or plasticity index test may exceed the allowable limit by more than 2 percentage points.

2.1.2. **Material Types**. Do not use fillers or binders unless approved. Furnish the type shown on the plans in accordance with the following.

2.1.2.1. **Type A**. Crushed stone produced and graded from oversize quarried aggregate that originates from a single, naturally occurring source. Do not use gravel or multiple sources.

2.1.2.2. **Type B**. Crushed or uncrushed gravel. Blending of two or more sources is allowed.

2.1.2.3. **Type C**. Crushed gravel with a minimum of 60% of the particles retained on a No. 4 sieve with two or more crushed faces as determined in accordance with Tex-460-A, Part I. Blending of two or more sources is allowed.

2.1.2.4. **Type D**. Type A material or crushed concrete. Crushed concrete containing gravel will be considered Type D material. Crushed concrete must meet the requirements of Section 247.2.1.2.6., "Recycled Material," and be managed in a way to provide for uniform quality. The Engineer may require separate dedicated stockpiles to verify compliance.

2.1.2.5. **Type E**. Caliche, iron ore, or as otherwise shown on the plans.

2.1.2.6. **Recycled Material**. Reclaimed asphalt pavement (RAP) and other recycled materials may be used when shown on the plans. Request approval to blend two or more sources of recycled materials. When RAP is allowed, do not exceed 20% RAP by weight, unless otherwise shown on the plans. The percentage limitations for other recycled materials will be as shown on the plans.

Provide recycled materials, other than RAP, that have a maximum sulfate content of 3,000 ppm when tested in accordance with Tex-145-E. Certify compliance with DMS-11000, "Evaluating and Using Nonhazardous Recyclable Materials Guidelines." In addition, recycled materials must be free of reinforcing steel and other objectionable material and have at most 1.5% deleterious material when tested in accordance with Tex-413-A. The liquid limit, plasticity index, wet ball mill, and compressive strength for all recycled materials are waived. When using RAP, crush RAP so that 100% passes the 2-in. sieve and does not exceed a maximum percent loss from decantation of 5.0% when tested in accordance with Tex-406-A. Test RAP without removing the asphalt. The final product must meet the requirements shown in Table 1 for the grade specified except when the Department requires a specific amount of Department-furnished RAP be added to the blend, unless otherwise shown on the plans.

The Contractor is responsible for uniformly blending the recycled material with the flexible base material to build a stockpile to meet the percentages required. Any Contractor-furnished surplus of recycled materials will remain the property of the Contractor. Remove Contractor-owned recycled materials from the project and dispose of them in accordance with federal, state, and local regulations before project acceptance.

2.2. **Water**. Furnish water free of industrial wastes and other objectionable matter.

2.3. **Material Sources**. Expose the vertical faces of all strata of material proposed for use when non-commercial sources are used. Secure and process the material by successive vertical cuts extending through all exposed strata, when directed.

2.4. **Stockpile Approval**. Stockpile is approved when the Engineer's test results meet the material requirements shown in Table 1.

1 Addendum 1 - Sheet Added

2.4.1. **Sampling**. The Contractor and the Engineer will sample flexible base from completed stockpiles in accordance with Tex-100-E. Personnel conducting sampling must be certified by the Department-approved soils and base certification program.

Sampling stockpiles may be located at the production site or at the project location. The Contractor will witness the Engineer's sampling and sample the stockpile for their own testing, and label as deemed necessary.

Sample the stockpile for the Engineer when shown on the plans. When the Contractor samples the stockpile for the Engineer, the Engineer must witness the sampling of material designated for the Engineer and the Materials and Tests Division (MTD). The Engineer will label their sampling containers as "Engineer" and "MTD," or as deemed necessary.

The Engineer will take immediate possession of the sample containers for the Engineer and MTD. The Engineer will maintain custody of the samples until all testing and reporting are completed.

2.4.2. **Referee Testing**. Referee testing is applicable for stockpile testing only. MTD is the referee laboratory. MTD may designate a laboratory from the Department's MPL for Commercial Laboratories Approved for Flexible Base Referee Requests as the referee laboratory as deemed necessary. The designated laboratory cannot be performing any testing under this Item for the Engineer or Contractor.

The Contractor may request referee testing when the Engineer's test results fail to meet any of the material requirements shown in Table 1 and the Contractor's sample from Section 2.4.1., "Sampling," for the same failing Department test, passes. The tests must be performed by a laboratory listed on the Department's MPL for Commercial Laboratories Approved for Flexible Base Referee Requests. Submit the request by email within 5 working days after receiving failing test results from the Engineer. Include completed test reports passing the applicable requirements shown in Table 1 in the email.

Record and submit completed test reports electronically on Department-provided templates in their original format meeting the applicable material requirements shown in Table 1. Use Department-provided templates to record and calculate all test data. The Engineer and the Contractor will provide any available test results to the other party when requested.

3. EQUIPMENT

Provide machinery, tools, and equipment necessary for proper execution of the work.

3.1. **Rollers**. Provide rollers in accordance with Item 210, "Rolling." Provide proof rollers in accordance with Item 216, "Proof Rolling," when required.

3.2. **Inertial Profiler**. When ride quality measurement is required, provide a high-speed or lightweight inertial profiler certified at the Texas A&M Transportation Institute. Provide equipment certification documentation. Display a current decal on the equipment indicating the certification expiration date.

4. CONSTRUCTION

Construct each layer uniformly, free of loose or segregated areas, and with the required density and moisture content. Provide a smooth surface that conforms to the typical sections, lines, and grades shown on the plans or as directed.

Stockpile base material temporarily at an approved location before delivery to the roadway. Build stockpiles in layers no greater than 2 ft. thick. Stockpiles must have a total height between 10 and 16 ft. unless otherwise approved. After construction and acceptance of the stockpile in accordance with Section 247.2.4., "Stockpile Approval," loading from the stockpile for delivery is allowed. Load by making successive vertical cuts through the entire depth of the stockpile.

1 Addendum 1 - Sheet Added

Do not add or remove material from temporary stockpiles that require sampling and testing before delivery, unless otherwise approved. Charges for additional sampling and testing required as a result of adding or removing material will be deducted from the Contractor's estimates.

Haul approved flexible base in clean trucks. Deliver the required quantity to each 100-ft. station or designated stockpile site as shown on the plans. Prepare stockpile sites as directed. When delivery is to the 100-ft. station, manipulate in conformance with the applicable Items.

4.1. **Preparation of Subgrade or Existing Base**. Remove or scarify existing asphalt concrete pavement in accordance with Item 105, "Removing Treated and Untreated Base and Asphalt Pavement," when shown on the plans or as directed. Shape the subgrade or existing base to conform to the typical sections shown on the plans or as directed.

When new base is required to be mixed with existing base, deliver, place, and spread the new flexible base in the required amount per station. Manipulate and thoroughly mix the new base with existing material to provide a uniform mixture to the specified depth before shaping.

Proof roll the roadbed in accordance with Item 216 before pulverizing or scarifying when shown on the plans or directed. Correct soft spots as directed.

4.2. **Placing**. Spread and shape flexible base into a uniform layer using an approved spreader the same day as delivered unless otherwise approved. Construct layers to the thickness shown on the plans. Maintain the shape of the course. Control dust by sprinkling, as directed. Correct or replace segregated areas as directed at no additional expense to the Department.

Place successive base courses and finish courses using the same construction methods required for the first course.

4.3. **Compaction**. Compact using density control unless otherwise shown on the plans. Multiple lifts are permitted when shown on the plans or approved. Bring each layer to the moisture content directed. When necessary, sprinkle the material in accordance with Item 204, "Sprinkling." Maintain moisture during compaction within ±2.0% of the optimum moisture content as determined in accordance with Tex-113-E.

Begin rolling longitudinally at the sides and proceed toward the center, overlapping on successive trips by at least 1/2 the width of the roller unit. Begin rolling at the low side and progress toward the high side on superelevated curves. Offset alternating trips of the roller. Operate rollers at a speed between 2 and 6 mph as directed.

Rework, recompact, and refinish material that fails to meet or that loses required moisture, density, stability, or finish requirements before the next course is placed or the project is accepted. Continue work until specification requirements are met. Perform the work at no additional expense to the Department.

Before final acceptance, the Engineer will select the locations of tests and measure the flexible base depth in accordance with Tex-140-E. Correct areas deficient by more than 1/2 in. in thickness by scarifying, adding material as required, reshaping, recompacting, and refinishing at the Contractor's expense.

4.3.1. **Ordinary Compaction**. Roll using approved compaction equipment as directed. Correct irregularities, depressions, and weak spots immediately by scarifying the areas affected, adding or removing approved material as required, reshaping, and recompacting.

4.3.2. **Density and Moisture Control**. Compact to a minimum of 100% of the maximum dry density and within ±2.0% of the optimum moisture content as determined in accordance with Tex-113-E, unless otherwise shown on the plans. Provide the Engineer with the beginning and ending station numbers of the area completed for testing. The Engineer will determine roadway density and moisture content of completed sections in accordance with Tex-115-E, Part I. The Engineer will determine random locations for testing in accordance with Tex-115-E, Part IV. Do not achieve density by drying the material after compaction.

1 Addendum 1 - Sheet Added

When the density is less than 100% of the maximum dry density, the Engineer may perform additional testing to determine the extent of the area to correct. The Engineer may accept the section if no more than one of the five most recent density tests is below the specified density and the failing test is no more than 3 pcf below the specified density.

4.3.3. **Miscellaneous and Small Areas**. Miscellaneous areas are those that typically involve handwork or discontinuous paving operations, such as temporary detours, driveways, mailbox turnouts, crossovers, gores, spot level-up areas, and other similar areas. Miscellaneous and small areas are not subject to density testing but may be tested as directed.

4.4. **Finishing**. After completing compaction, clip, skin, or tight-blade the surface using a maintainer or subgrade trimmer to a depth of approximately 1/4 in. Remove loosened material and dispose of it at an approved location. Seal the clipped surface immediately by rolling using a pneumatic tire roller until a smooth surface is attained. Add small increments of water as needed during rolling. Shape and maintain the course and surface in conformity with the typical sections, lines, and grades as shown on the plans or as directed.

Correct grade deviations greater than 1/4 in. in 16 ft. measured longitudinally. Correct grade deviations greater than 1/4 in. over the entire width of the cross-section in areas where surfacing is to be placed. Correct by loosening and adding or removing material. Reshape and recompact in accordance with Section 247.4.3., "Compaction."

4.5. **Curing**. Cure the finished section until the moisture content is at least 2 percentage points below optimum or as directed before applying the next successive course or prime coat.

4.6. **Ride Quality**. Measurement of ride quality only applies to the final travel lanes that receive a one- or two-course surface treatment for the final riding surface, unless otherwise shown on the plans. Measure the ride quality of the base course either before or after the application of the prime coat, as directed, and before placement of the surface treatment. Use a certified profiler operator listed on the Department's MPL. When requested, furnish the Engineer with documentation for the person certified to operate the profiler.

Provide all profile data to the Engineer in electronic data files within 3 days of measuring the ride quality using the format specified in Tex-1001-S. The Engineer will use Department software to evaluate longitudinal profiles to determine areas requiring corrective action. Correct 0.1-mi. sections with an average international roughness index (IRI) value greater than 100 in. per mile to an IRI value of 100 in. per mile or less, unless otherwise shown on the plans. Reprofile and correct sections that fail to maintain ride quality before the placement of the surface treatment, as directed. Unless ride deterioration is due to environmental impact, traffic, or other incidents outside the Contractor's control, perform this work at no additional expense to the Department, as approved.

5. MEASUREMENT

Flexible base will be measured as follows.

- **Flexible Base (Complete in Place)**. The ton, square yard, or any cubic yard method.
- **Flexible Base (Roadway Delivery)**. The ton or any cubic yard method.
- **Flexible Base (Stockpile Delivery)**. The ton, cubic yard in vehicle, or cubic yard in stockpile.

Measurement by the cubic yard in final position and square yard is a plans quantity measurement. The quantity to be paid is the quantity shown in the proposal, unless modified by Article 9.2., "Plans Quantity Measurement." Additional measurements or calculations will be made if adjustments of quantities are required.

Measurement is further defined for payment as follows.

5.1. **Cubic Yard in Vehicle**. By the cubic yard in vehicles of uniform capacity at the point of delivery.

1 Addendum 1 - Sheet Added

5.2. **Cubic Yard in Stockpile**. By the cubic yard in the final stockpile position, by the method of average end areas, or as shown on the plans.

5.3. **Cubic Yard in Final Position**. By the cubic yard in the completed and accepted final position. The volume of base course is computed in place by the method of average end areas between the original subgrade or existing base surfaces and the lines, grades, and slopes of the accepted base course, or as shown on the plans.

5.4. **Square Yard**. By the square yard of surface area in the completed and accepted final position. The surface area of the base course is based on the width of flexible base, or as shown on the plans.

5.5. **Ton**. By the ton of dry weight in vehicles as delivered. The dry weight is determined by deducting the weight of the moisture in the material at the time of weighing from the gross weight of the material. The Engineer will determine the moisture content in the material in accordance with Tex-103-E from samples taken at the time of weighing.

When material is measured in trucks, the weight of the material will be determined on certified scales, or the Contractor must provide a set of standard platform truck scales at an approved location. Scales must meet the requirements of Item 520, "Weighing and Measuring Equipment."

6. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for the types of work described below. No additional payment will be made for thickness or width exceeding that shown on the typical section or provided on the plans for cubic yard in the final position or square yard measurement.

Sprinkling and rolling, except proof rolling, will not be paid for directly, but will be subsidiary to this Item unless otherwise shown on the plans. When proof rolling is shown on the plans or directed, it will be paid for in accordance with Item 216.

Where subgrade is constructed under this Contract, correction of soft spots in the subgrade will be at the Contractor's expense. Where subgrade is not constructed under this Contract, correction of soft spots in the subgrade will be paid in conformance with pertinent Items or in accordance with Article 4.4., "Changes in the Work."

6.1. **Flexible Base (Complete in Place)**. Payment will be made for the type and grade specified. For cubic yard measurement, "In Vehicle," "In Stockpile," or "In Final Position" will be specified. For square yard measurement, a depth will be specified. This price is full compensation for furnishing materials, temporary stockpiling, assistance provided in stockpile sampling and operations to level stockpiles for measurement, loading, hauling, delivery of materials, spreading, blading, mixing, shaping, placing, compacting, reworking, finishing, correcting locations where thickness is deficient, curing, furnishing scales and labor for weighing and measuring, equipment, labor, tools, and incidentals.

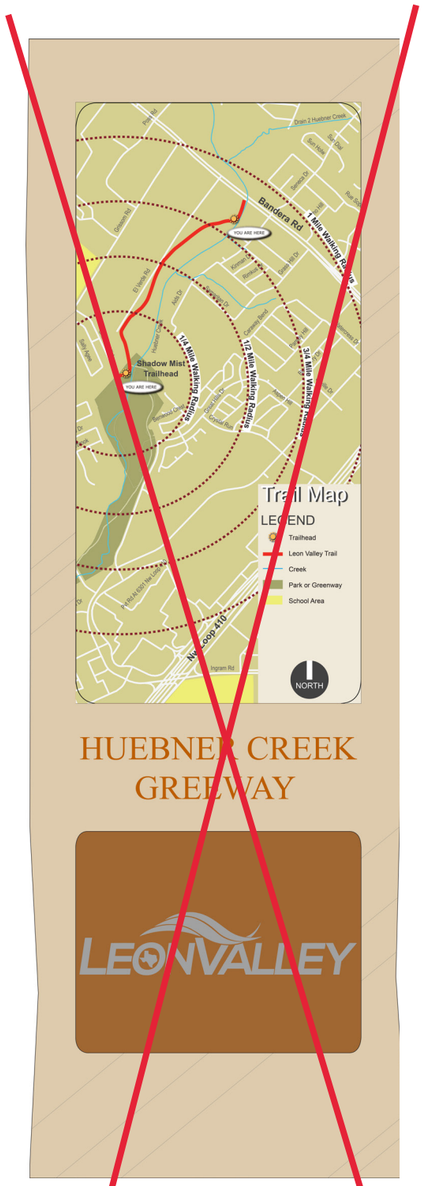
6.2. **Flexible Base (Roadway Delivery)**. Payment will be made for the type and grade specified. For cubic yard measurement, "In Vehicle," "In Stockpile," or "In Final Position" will be specified. The unit price bid will not include processing at the roadway. This price is full compensation for furnishing materials, temporary stockpiling, assistance provided in stockpile sampling and operations to level stockpiles for measurement, loading, hauling, delivery of materials, furnishing scales and labor for weighing and measuring, equipment, labor, tools, and incidentals.

6.3. **Flexible Base (Stockpile Delivery)**. Payment will be made for the type and grade specified. For cubic yard measurement, "In Vehicle" or "In Stockpile" will be specified. The unit price bid will not include processing at the roadway. This price is full compensation for furnishing and disposing of materials, preparing the stockpile area, temporary or permanent stockpiling, assistance provided in stockpile sampling and operations to level

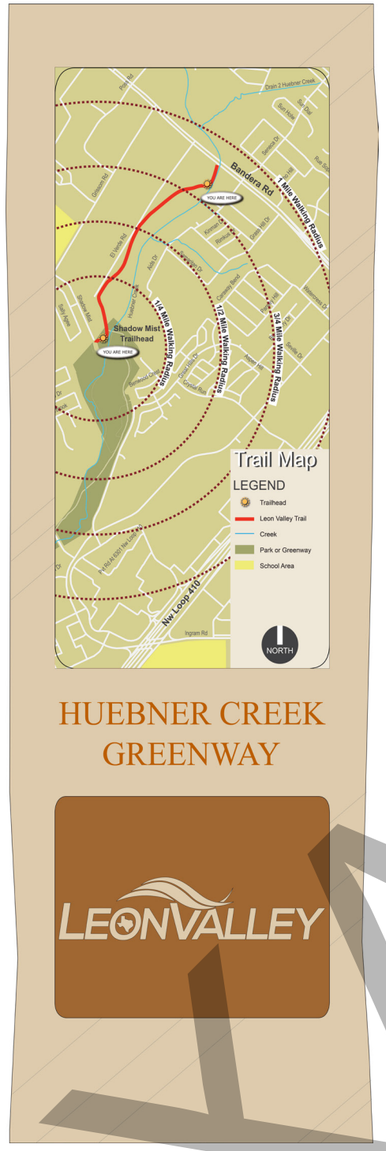
1 Addendum 1 - Sheet Added

stockpiles for measurement, loading, hauling, delivery of materials to the stockpile, furnishing scales and labor for weighing and measuring, equipment, labor, tools, and incidentals.

1 Addendum 1 - Sheet Added

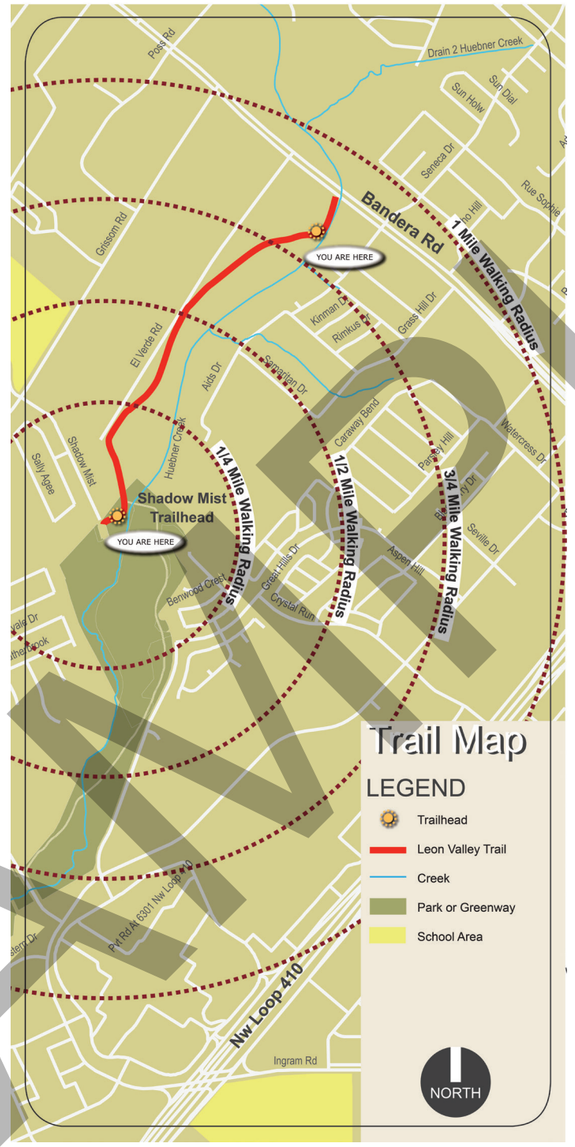


TRAILHEAD KIOSK
(OPTION 1)



TRAILHEAD KIOSK
(OPTION 2)

1



TRAILHEAD MAP

~~TRAILHEAD KIOSK (OPTION 1)- Shows the trailhead map, corten lettering and corten sign with aluminum city logo.~~

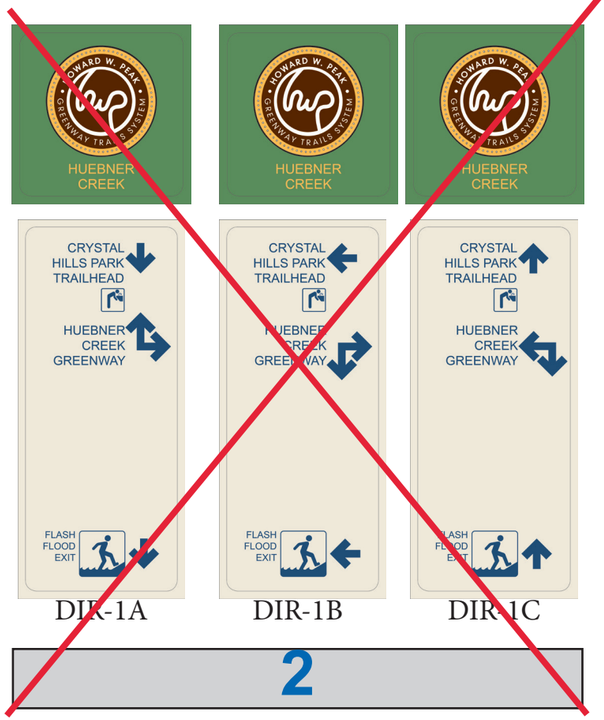
TRAILHEAD KIOSK (OPTION 2)- Shows the trailhead map, corten lettering and corten sign with the city logo cut out showing the stone below.

TRAILHEAD MAP- The map shown has both locations shown but the final two maps will have their own locations showing were the viewer is located.

1

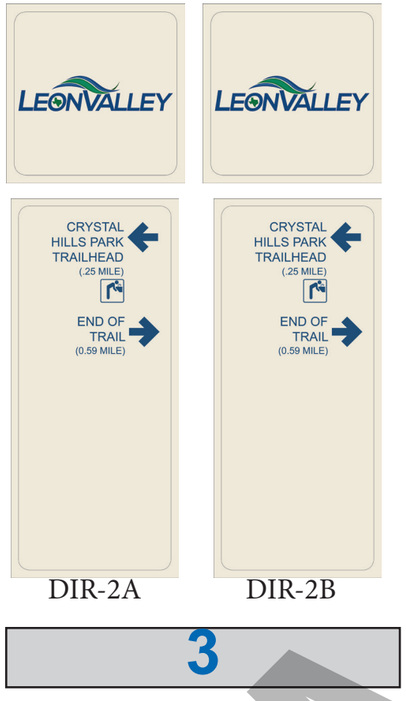
1 Addendum 1- New Page

1



DIR-1A DIR-1B DIR-1C

2



DIR-2A DIR-2B

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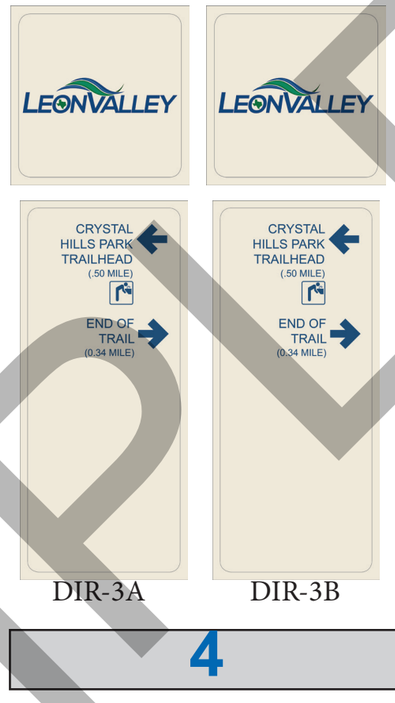

DIR-3A DIR-3B

4

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1

STATE OF TEXAS
RICARDO J ZAMORA
94752
LICENSED
PROFESSIONAL ENGINEER

01/27/2026

ARDURRA
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Surveying Firm 10126502

LEONVALLEY

Texas Department of Transportation

HUEBNER CREEK GREENWAY
HIKE AND BIKE TRAIL
CITY OF LEON VALLEY

SHEET INDEX

NO.	DESCRIPTION	BY	DATE
1	REVISION FOR CONSTRUCTION	RZ	01/21/2026

FED.RD. DIV.NO.	FEDERAL AID PROJECT		SHEET NO.
6	2B25(182)		2
STATE	DIST.	COUNTY	
TEXAS	SAT	BEXAR	
CONT.	SECT.	JOB	HIGHWAY NO.
0915	12	735	SH16

ITEM	DESCRIPTION	UNIT	QUANTITY
100 7002	PREPARING ROW	STA	43
104 7013	REMOV CONC (SIDEWALK OR SUP)	SY	275
110 7001	EXCAVATION (ROADWAY)	CY	2302
132 7002	EMBANKMENT (FINAL)(DENS CONT)(TY A)	CY	303
160 7002	FURNISHING AND PLACING TOPSOIL (4")	SY	4332
162 7002	HYDRO-MULCH	SY	4332
168 7001	VEGETATIVE WATERING	MG	68
247 7021	FL SB (CMP IN PLC)(TY A GR 1-2) (4")	SY	350
400 7010	CEM STABIL BKFL	CY	24
403 7001	TEMPORARY SPL SHORING	SF	300
416 7004	DRILLED SHAFTS (24")	LF	80
420 7002	CL A CONC (MISC) (LANDSCAPE AMMENITIES)	CY	10
432 7002	CL C CONC (ABUT)	CY	25
432 7004	RIPRAP (CONC)(CLA)	CY	93
432 7012	STR STEEL (MISC NON-BRIDGE)	LB	322
500 7001	MOBILIZATION	LS	1
502 7001	BARRICADES, SIGNS, AND TRAFFIC HANDLING	MO	6
506 7002	ROCK FILTER DAMS (INSTALL) (TY 2)	LF	305
506 7011	ROCK FILTER DAMS (REMOVE)	LF	305
506 7020	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	225
506 7024	CONSTRUCTION EXITS (REMOVE)	SY	225
506 7039	TEMP SEDMT CONT FENCE (INSTALL)	LF	3900
506 7041	TEMP SEDMT CONT FENCE (REMOVE)	LF	3900
4004 7001	PREFAB PED STL TRUSS BRIDGE SPAN (70 FT)	EA	1
SS1002-COLV	CONC SIDEWALKS (5")	CY	890
SS1003-COLV	LANDSCAPE AMENITY (TRAILHEAD SGN)	EA	2
SS1004-COLV	LANDSCAPE AMENITY (DIRECTION MONUMENT)	EA	2

1

NO.	DESCRIPTION	BY	DATE
1	REVISION FOR CONSTRUCTION	RZ	01/21/2026

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LEONVALLEY

Texas Department of Transportation

HUEBNER CREEK GREENWAY
HIKE AND BIKE TRAIL
CITY OF LEON VALLEY

SUMMARY SHEET

SCALE: N.T.S.

FED.RD. DIV.NO.	FEDERAL AID PROJECT		SHEET NO.
6	2B25(182)		14
STATE	DIST.	COUNTY	
TEXAS	SAT	BEXAR	
CONT.	SECT.	JOB	HIGHWAY NO.
0915	12	735	SH16

DETOURS, BARRICADES, WARNING SIGNS, SEQUENCE OF WORK, ETC.

THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE REQUIREMENTS OF ITEM 7, "LEGAL RELATIONS AND RESPONSIBILITIES TO THE PUBLIC", OF THE STANDARD SPECIFICATIONS. IN ADDITION TO THESE REQUIREMENTS, THE FOLLOWING PROVISIONS SHALL ALSO GOVERN ON THIS CONTRACT:

1. GENERAL

(1) TRAFFIC MUST BE HANDLED THROUGHOUT THE PROJECT DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING A SAFE AND COMFORTABLE PASSAGE FOR VEHICULAR AND PEDESTRIAN TRAFFIC WITH MINIMAL INCONVENIENCE TO THE PUBLIC, AS SHOWN IN THE PLANS OR AS DIRECTED/APPROVED BY THE ENGINEER.

(2) THE CONTRACTOR MAY PROPOSE/RECOMMEND MODIFICATIONS TO THE SEQUENCE OF WORK FOR CONSIDERATION BY THE ENGINEER. ANY MAJOR RECOMMENDED MODIFICATION BY THE CONTRACTOR SHALL INCLUDE ANY CHANGES TO THE VARIOUS BID ITEMS, IMPACT TO TRAFFIC, EFFECT OF OVERALL PROJECT IN TIME AND COST, ETC. IF THIS PROPOSAL IS IMPLEMENTED, THE CONTRACTOR WILL BE RESPONSIBLE FOR DEVELOPING DETAILED PLAN SHEETS TO BE SEALED BY A LICENSED PROFESSIONAL ENGINEER FOR INCLUSION WITH THE CHANGE ORDER. THE CONTRACTOR CANNOT PROCEED WITH ANY CONSTRUCTION OPERATIONS BASED ON A REVISED PHASE/SEQUENCE UNTIL WRITTEN APPROVAL IS OBTAINED FROM THE ENGINEER. IF AT ANY TIME DURING CONSTRUCTION THE CONTRACTOR'S PROPOSED PLAN OF OPERATION FOR HANDLING TRAFFIC DOES NOT PROVIDE FOR SAFE AND COMFORTABLE MOVEMENT, THE CONTRACTOR WILL IMMEDIATELY CHANGE THEIR OPERATION TO CORRECT THE UNSATISFACTORY CONDITION.

(3) DO NOT STORE ANY CONSTRUCTION MATERIAL OR EQUIPMENT AT ANY LOCATION THAT WILL CONSTITUTE A HAZARD AND WILL ENDANGER TRAFFIC.

(4) THE CONTRACTOR WILL PROVIDE ADVANCE NOTIFICATION TO THE ENGINEER OF IMPENDING / UPCOMING LANE CLOSURES FOR ALL TEMPORARY AND / OR PERMANENT LANES, RAMP, CONNECTOR, FRONTAGE, SHOULDER, ETC. CLOSURES OR DETOURS. SEE GENERAL NOTES FOR NOTIFICATION REQUIREMENTS.

(5) ACCESS TO ADJOINING PROPERTY MUST BE MAINTAINED AT ALL TIMES.

(6) TEMPORARY DRAINAGE IS THE RESPONSIBILITY OF THE CONTRACTOR.

(7) AT NO TIME SHALL TWO CONSECUTIVE INTERSECTING ROADWAYS BE CLOSED AT ONE TIME DURING CONSTRUCTION.

(8) AT NO TIME SHALL TWO CONSECUTIVE RAMPS BE CLOSED AT ONE TIME DURING CONSTRUCTION OR OVERLAY OPERATIONS.

(9) UNLESS OTHERWISE NOTED IN THE PLANS AND/OR AS DIRECTED BY THE ENGINEER, DAILY LANE CLOSURES SHALL BE LIMITED ACCORDING TO THE FOLLOWING RESTRICTIONS:
NIGHTTIME: COORDINATE WITH LEON VALLEY ENGINEER. (WITH UNIFORMED OFF DUTY LAW ENFORCEMENT OFFICERS) WORK HOURS: 7AM TO 7PM.
WEEKEND CLOSURES WHEN APPROVED BY THE ENGINEER: COORDINATE WITH LEON VALLEY ENGINEER.
NO LANE CLOSURES WILL BE PERMITTED FOR THE FOLLOWING DATES AND/OR SPECIAL EVENTS:
BETWEEN DECEMBER 15 AND JANUARY 1.
FIESTA WEEK AND TAX-FREE WEEKEND. (BEXAR COUNTY ONLY)
WEDNESDAY BEFORE THANKSGIVING THRU THE SUNDAY AFTER THANKSGIVING
SATURDAY AND SUNDAY BEFORE MEMORIAL DAY AND LABOR DAY.
SATURDAY OR SUNDAY WHEN JULY 4 FALLS ON A FRIDAY OR MONDAY.
ELECTION DAYS (BEXAR COUNTY ONLY)
DURING MAJOR EVENTS AT THE AT&T CENTER (SPURS HOME GAMES, RODEO, CONCERTS, ETC.), ALAMODOME AND OR CONVENTION CENTER (BEXAR COUNTY ONLY)
EASTER WEEKEND - APRIL 3, 2025 THROUGH APRIL 5, 2025

(10) REMOVAL AND DISPOSAL OF EXISTING ABANDONED UTILITIES (EITHER PREVIOUSLY ABANDONED OR ABANDONED DURING THIS PROJECT) REQUIRED TO SUPPORT THIS PROJECT'S CONSTRUCTION SHALL BE PERFORMED UNDER THE OVERALL PREPARE RIGHT-OF-WAY ITEM (ITEM 100).

(11) COORDINATE WITH ADJACENT PROJECTS.

(12) COVER PERMANENT SIGNS IF NOT USED. THIS IS SUBSIDIARY TO ITEM 502.

(13) EXCAVATION WITHIN 5 FEET OF AN EXISTING CPS ENERGY POLE WILL REQUIRE POLE BRACING. CONTACT CPS ENERGY UTILITY COORDINATION TO REQUEST POLE BRACING (JOHN OFFER, JEOFFER@CPSENERGY.COM). THE ESTIMATED DURATION FOR THE POLE BRACING PROCESS IS APPROXIMATELY 6 TO 8 WEEKS.

(14) COORDINATE WITH THE CITY OF SAN ANTONIO OR TXDOT FOR SIGNAL TIMING REVISIONS, AS NECESSARY.

2. SEQUENCE OF WORK

(1) THIS PROJECT WILL BE CONSTRUCTED IN ONE PHASE. BEFORE THE COMMENCEMENT OF EACH PHASE, INSTALL ADVANCE WARNING SIGNS, TEMPORARY SIGNS, AND BARRICADES AS SHOWN ON THE PLANS AND/OR AS DIRECTED/APPROVED BY THE ENGINEER. DAILY LANE CLOSURES WILL BE USED IN ACCORDANCE WITH STATE TCP STANDARDS. DROP OFF CONDITIONS OF GREATER THAN 2" MUST HAVE A 3:1 SLOPE AT THE END OF EACH DAY, AS WELL AS THROUGHOUT THE PROJECT WHERE ACCESS TO ADJACENT PROPERTIES IS ALLOWED TO DRIVEWAYS AND SIDE STREETS.

(2) PREPARING ROW / REMOVAL OF EXISTING ITEMS TO BE DONE ONLY IN AREAS WHERE WORK IS OCCURRING, AS PER THE PHASES NOTED BELOW.

(3) PLANING, SURFACE TREATMENTS, AND OVERLAYS SHALL BE PERFORMED IN THE DIRECTION OF TRAFFIC. BEGIN SURFACE CONSTRUCTION ON THE HIGH SIDE OF THE ROAD TO AVOID WATER PONDING ISSUES.

(4) A BRIEF DESCRIPTION OF THESE PHASES ARE AS FOLLOWS:

PHASE 1

THIS PHASE INTENDS TO CONSTRUCT LEON VALLEY'S HUEBNER CREEK HIKE AND BIKE TRAIL, INCLUDING THE INSTALLATION OF A PREFABRICATED STEEL PEDESTRIAN BRIDGE.

1. INSTALL ANY ADVANCE WARNING SIGNS THAT MAY BE REQUIRED
2. INSTALL BMP'S AS PER SW3P FOR THE PROJECT LIMITS AS SHOWN IN THE SW3P
3. PREPARE ROW FOR 1100 LF OF TRAIL CONSTRUCTION
4. CONSTRUCT TRAIL IN 1100 LF TRAIL SEGMENTS, AS PER PLANS
5. AT THE COMPLETION OF A 1100LF SEGMENT, GRADE AND INSTALL TOPSOIL AND SEEDING (HYDRO-MULCH)
6. WATER THE SEEDING (HYDRO-MULCH) AS STATED IN PROJECT SPECIFICATIONS AND GENERAL NOTES FOR
7. REPEAT STEPS 3 THROUGH 6 UNTIL TRAIL LIMITS ARE COMPLETE
9. WHEN WORKING ON EVERS RD. UTILITZE TEMPORARY LANE CLOSURE TCP STANDARD (2-4a)
9. DURING TRAIL OPERATIONS, INSTALL DRILLED SHAFTS, ABUTMENTS, AND PEDESTRIAN BRIDGE AS PER BRIDGE PLANS
10. INSTALL LANDSCAPE FEATURES ALONG TRAIL
11. FINAL CLEAN UP OF PROJECT
12. REMOVE BMP'S

3. SAFETY

(1) THE CONTRACTOR WILL PROVIDE, CONSTRUCT AND MAINTAIN BARRICADES AND SIGNS IN ACCORDANCE WITH STATE STANDARDS. ANY SIGNS REQUIRED THAT ARE NOT DETAILED IN THE STANDARD SHEETS SHALL BE IN CONFORMANCE WITH THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" AND THE "STANDARD HIGHWAY SIGN DESIGNS FOR TEXAS."

(2) BARRICADES AND WARNING SIGNS SHALL BE PLACED AS INDICATED ON THE PLANS. THIS SHALL BE CONSIDERED THE MINIMUM REQUIRED TO PROVIDE FOR THE SAFETY OF TRAFFIC DURING CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN OTHER SUCH BARRICADES AND SIGNS DEEMED NECESSARY BY THE ENGINEER OR AS DIRECTED BY FIELD CONDITIONS, TO PROVIDE FOR THE PASSAGE OF TRAFFIC IN SAFETY AT ALL TIMES.

(3) THE CONTRACTOR SHALL PROVIDE AND MAINTAIN FLAGGERS AS DIRECTED/APPROVED BY THE ENGINEER, AT SUCH POINTS, AND FOR SUCH PERIODS OF TIME AS MAY BE REQUIRED, TO PROVIDE FOR THE SAFETY OF THE TRAVELING PUBLIC AND THE CONTRACTOR'S PERSONNEL.

(4) THE CONTRACTOR SHALL KEEP THE ROADWAY CLEAN AND FREE OF DIRT OR OTHER MATERIALS DURING HAULING OPERATIONS. IF THE CONTRACTOR DOES NOT MAINTAIN A CLEAN ROADWAY, THEY SHALL CEASE ALL CONSTRUCTION OPERATIONS, WHEN DIRECTED BY THE ENGINEER, TO CLEAN THE ROADWAY TO THE SATISFACTION OF THE ENGINEER.

4. HAULING EQUIPMENT

(1) THE USE OF RUBBER-TIRED EQUIPMENT WILL BE REQUIRED FOR MOVING DIRT OR OTHER MATERIALS ALONG OR ACROSS PAVEMENTED SURFACES. WHERE THE CONTRACTOR DESIRES TO MOVE ANY EQUIPMENT NOT LICENSED FOR OPERATION ON PUBLIC HIGHWAYS, ON OR ACROSS PAVEMENT. THEY SHALL PROTECT THE PAVEMENT FROM DAMAGE AS DIRECTED / APPROVED BY THE ENGINEER.

(2) THROUGHOUT CONSTRUCTION OPERATIONS, THE CONTRACTOR WILL BE REQUIRED TO CONDUCT THEIR HAULING OPERATIONS IN A MANNER SUCH THAT VEHICLES WILL NOT HAUL OVER PREVIOUSLY RECOMPACTED SUBGRADE OR COMPACTED BASE MATERIAL, EXCEPT IN SHORT SECTIONS FOR DUMPING MANIPULATIONS.

5. FINAL CLEAN UP

UPON COMPLETION OF THE WORK AND BEFORE FINAL ACCEPTANCE AND FINAL PAYMENT IS MADE, THE CONTRACTOR SHALL CLEAR AND REMOVE FROM THE SITE ALL SURPLUS AND DISCARDED MATERIALS AND DEBRIS OF EVERY KIND AND LEAVE THE ENTIRE PROJECT IN A SMOOTH, NEAT AND SIGHTLY CONDITION.

6. PAYMENT

ALL BARRICADES, SIGNS, AND FLAGGERS SHALL BE SUBSIDIARY TO ITEM 502 BARRICADES, SIGNS AND TRAFFIC HANDLING. ALL EROSION AND SEDIMENT CONTROL DEVICES WILL BE PAID FOR UNDER ITEM 506 TEMPORARY EROSION, SEDIMENTATION, AND ENVIRONMENTAL CONTROLS. ALL WORK ZONE PAVEMENT MARKINGS WILL BE PAID FOR UNDER ITEM 662 WORK ZONE PAVEMENT MARKINGS. ALL OTHER WORK AND MATERIALS SHALL BE SUBSIDIARY TO THE VARIOUS BID ITEMS UNLESS OTHERWISE INDICATED IN THE PLANS.

NO.	DESCRIPTION	BY	DATE
1	REVISION FOR CONSTRUCTION	RZ	01/21/2026

STATE OF TEXAS
RICARDO J ZAMORA
94752
LICENSED
PROFESSIONAL ENGINEER
R.Z., P.E.
01/27/2026

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Surveying Firm 10126502

LEONVALLEY

Texas Department of Transportation

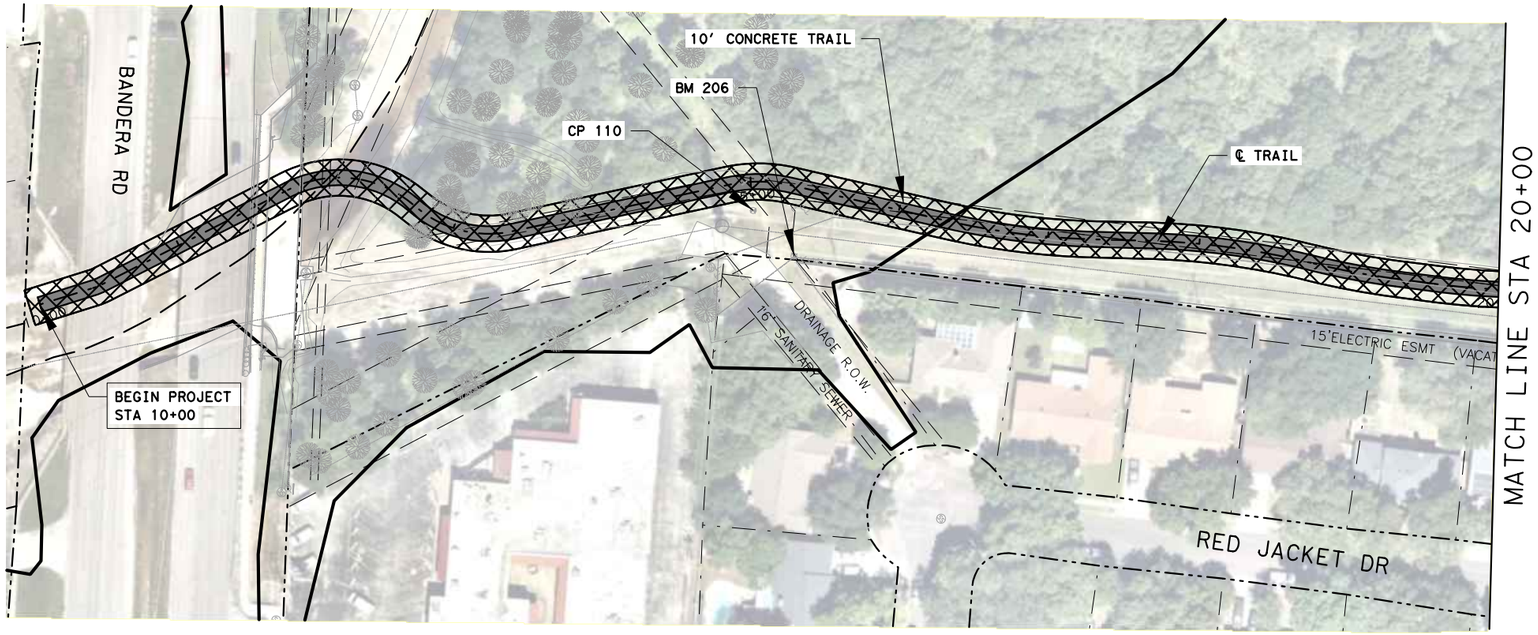
HUEBNER CREEK GREENWAY
HIKE AND BIKE TRAIL
CITY OF LEON VALLEY

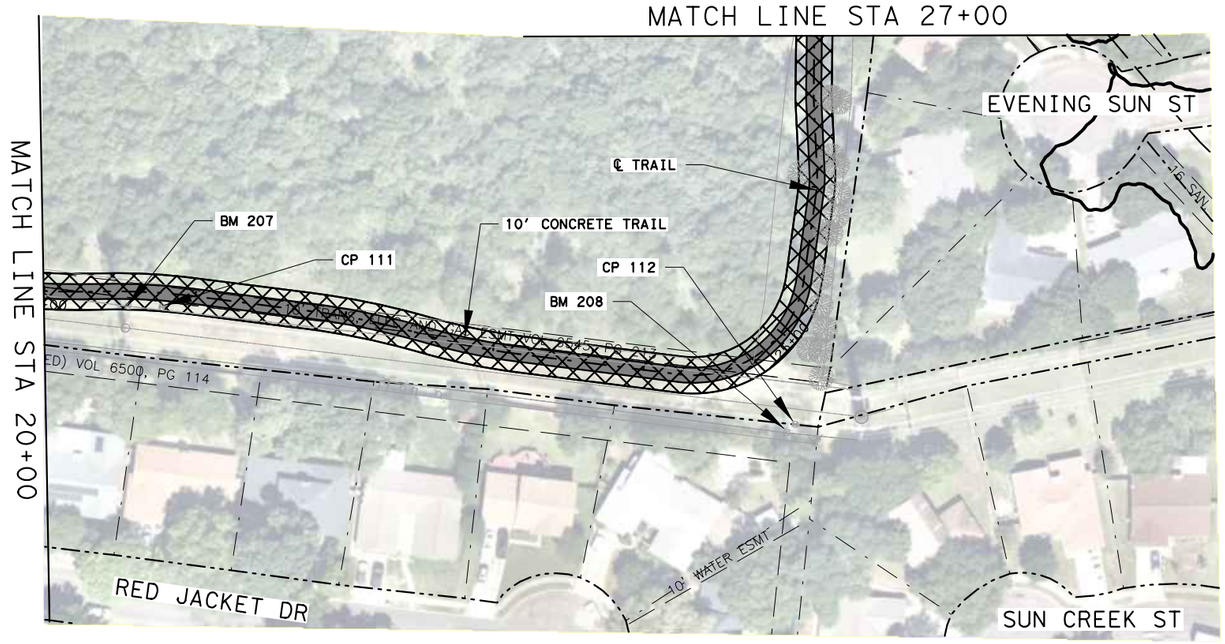
TRAFFIC CONTROL PLAN SEQUENCE OF WORK

SCALE: N.T.S.

FED.RD. DIV.NO.	FEDERAL AID PROJECT		SHEET NO.
6	2B25(182)		16
STATE	DIST.	COUNTY	
TEXAS	SAT	BEXAR	
CONT.	SECT.	JOB	HIGHWAY NO.
0915	12	735	SH16

Plotted by: rgallegos
1/27/2026
D:\\ardurra-pw.bentley.com:Ardurra-pw-01\Documents\Projects\Texas\Municipal\City of Leon Valley\440_HuebnerCreekV4 - Design\Plan Set\2. TCP\170165.440_TCP_NOTES.dgn

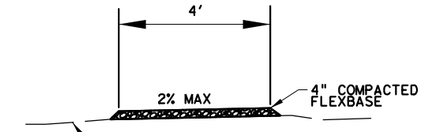




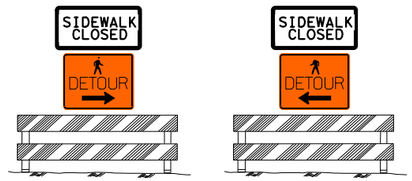
1

NOTES:

1. CONTRACTOR TO COORDINATE WITH THE CITY OF LEON VALLEY FOR CONSTRUCTION ENTRANCE/EXIT
2. TEMPORARY SIDEWALK TO BE FIELD VERIFIED BY CONTRACTOR AND CITY OF LEON VALLEY PROJECT MANAGER



TEMPORARY SIDEWALK



DETAIL A

STATE OF TEXAS
RICARDO J ZAMORA
94752
LICENSED
PROFESSIONAL ENGINEER

01/27/2026

LEGEND

- WW — WASTE WATER
- W — WATER
- C — BURIED CABLE
- G — BURIED GAS
- UT — BURIED TEL
- OHE — OH ELEC
- OE/OT/CTV — OH ELEC/OH TEL/OH CBL
- X — X — EXIST FENCE
- EXIST TREE
- WM — WATER METER
- WATER VALVE
- TELE PEDESTAL
- LIGHT POLE
- POWER POLE
- GUY WIRE
- SIGN
- MAIL BOX
- S — SANITARY SEWER
- MH — STORM DRAINAGE
- CLEAN OUT
- FIRE HYDRANT
- T — AT&T
- PROP CONC TRAIL
- 100-YEAR FLOODPLAIN
- CONSTRUCTION AREA
- TEMPORARY FLEX BASE

1

NO.	DESCRIPTION	BY	DATE
1	REVISION FOR CONSTRUCTION	RZ	01/21/2026

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LEONVALLEY

Texas Department of Transportation

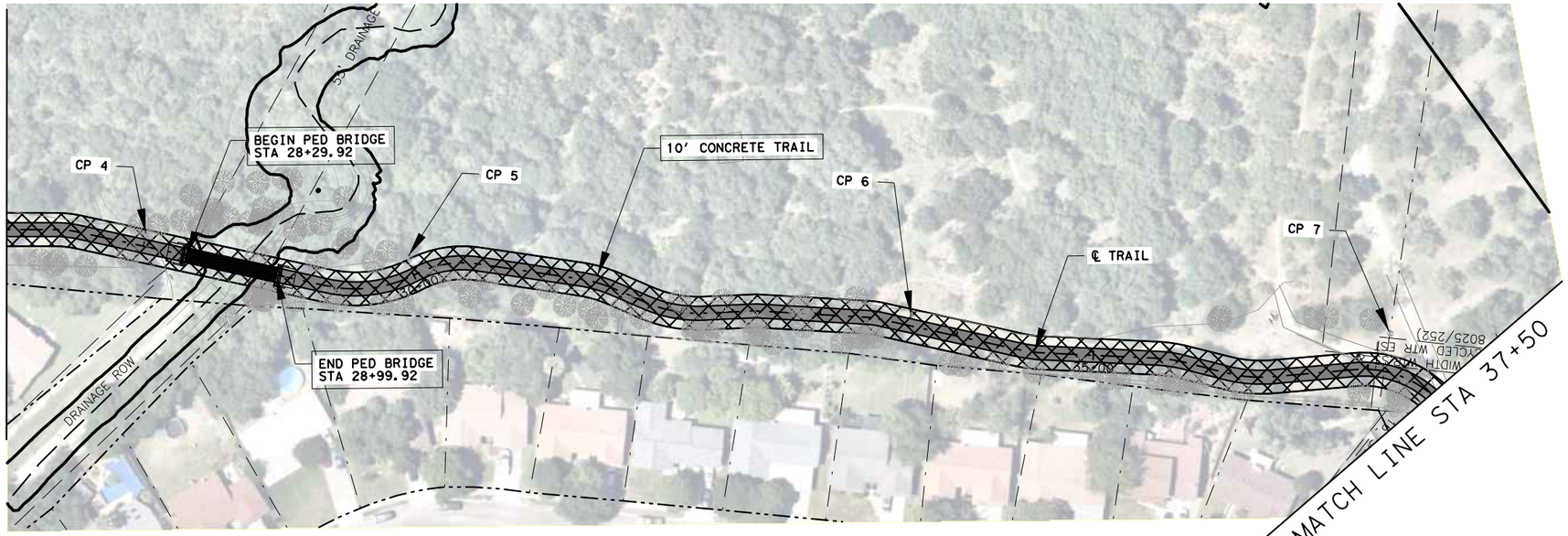
HUEBNER CREEK GREENWAY
HIKE AND BIKE TRAIL
CITY OF LEON VALLEY

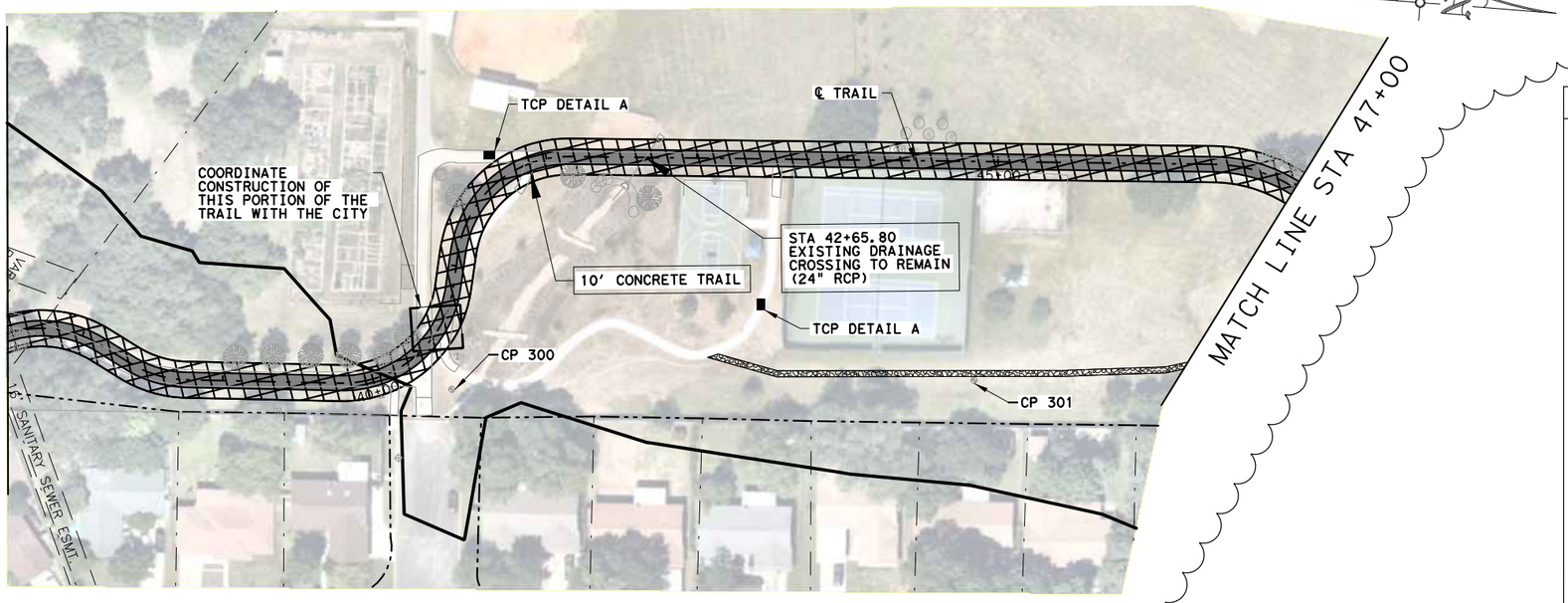
CONSTRUCTION PHASE LAYOUT BEGIN TO STA 27+00

HORIZ. SCALE: 1"=100'

FED.RD. DIV.NO.	FEDERAL AID PROJECT		SHEET NO.
6	2B25(182)		17
STATE	DIST.	COUNTY	
TEXAS	SAT	BEXAR	
CONT.	SECT.	JOB	HIGHWAY NO.
0915	12	735	SH16

Plotted by: rgallegos
1/27/2026
W:\Ardurra-pw.bentley.com:Ardurra-pw-01\Documents\Projects\Texas\Municipal\City of Leon Valley\440_Huebner Creek\V4 - Design\Plan Set\2. TCP\170165.440_TCP LAYOUT_1.dgn





NOTES:

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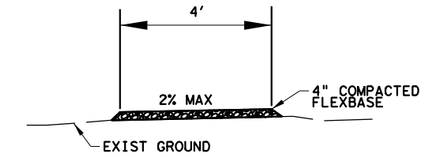
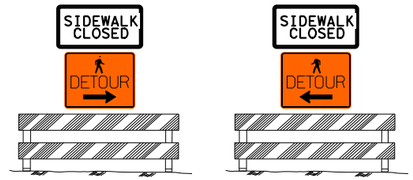
2. TEMPORARY SIDEWALK TO BE FIELD VERIFIED BY CONTRACTOR AND CITY OF LEON VALLEY PROJECT MANAGER



TEMPORARY SIDEWALK



DETAIL A

STATE OF TEXAS
RICARDO J ZAMORA
94752
LICENSED PROFESSIONAL ENGINEER

01/27/2026

NO.	DESCRIPTION	BY	DATE
1	REVISION FOR CONSTRUCTION	RZ	01/21/2026

LEGEND

- WW — WASTE WATER
- W — WATER
- C — BURIED CABLE
- G — BURIED GAS
- UT — BURIED TEL
- OHE — OH ELEC
- OE/OT/CTV — OH ELEC/OH TEL/OH CBL
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LEONVALLEY

Texas Department of Transportation

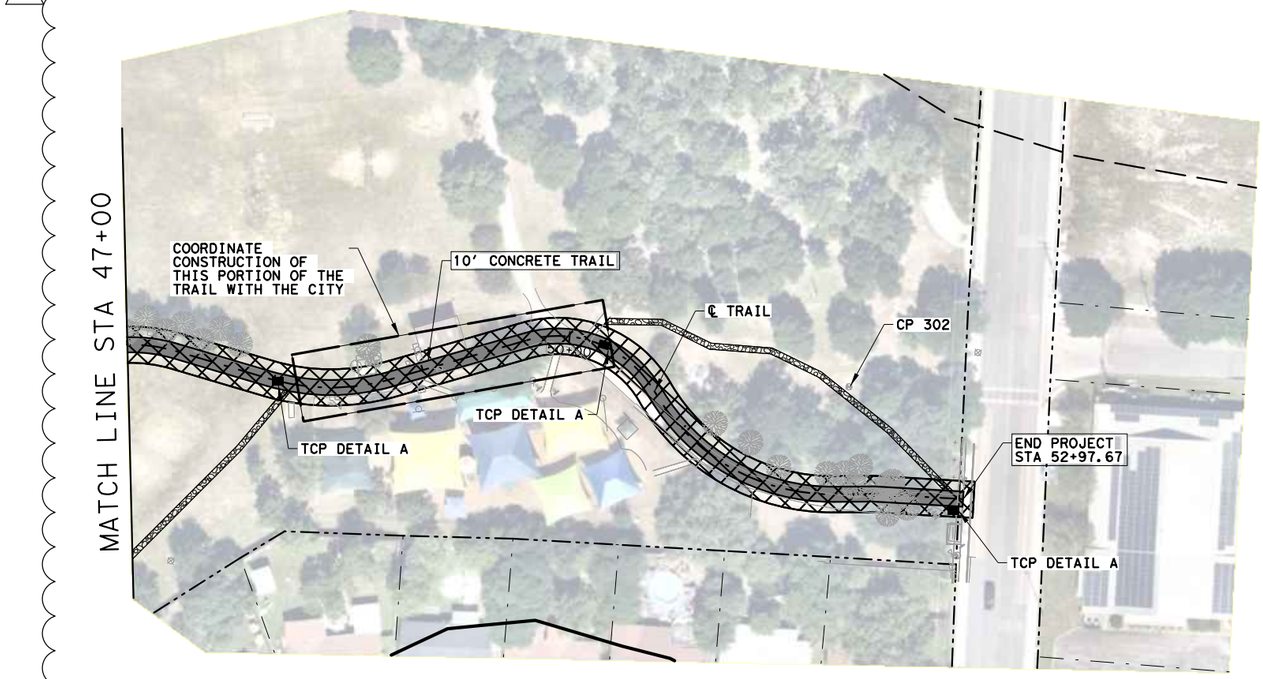
HUEBNER CREEK GREENWAY
HIKE AND BIKE TRAIL
CITY OF LEON VALLEY

CONSTRUCTION PHASE LAYOUT STA 27+00 TO 47+00

HORIZ. SCALE: 1"=100'

FED.RD. DIV.NO.	FEDERAL AID PROJECT		SHEET NO.
6	2B25(182)		18
STATE	DIST.	COUNTY	
TEXAS	SAT	BEXAR	
CONT.	SECT.	JOB	HIGHWAY NO.
0915	12	735	SH16

Plotted by: rgallegos
1/27/2026
pw:\\ardurra-pw.bentley.com:Ardurra-pw-01\Documents\Projects\Texas\Municipal\City of Leon Valley\440_HuebnerCreekV4 - Design\Plan Set\2. TCP\170165.440_TCP LAYOUT 2.dgn



1

NOTES:

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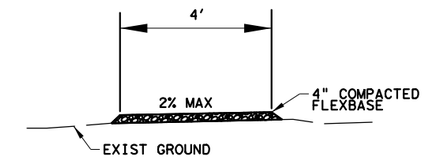
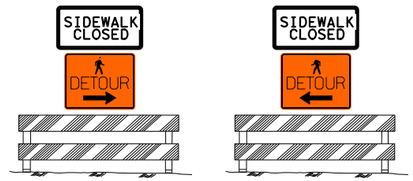


TEMPORARY SIDEWALK



DETAIL A

STATE OF TEXAS
RICARDO J ZAMORA
94752
LICENSED
PROFESSIONAL ENGINEER

01/27/2026

LEGEND

WW	WASTE WATER
W	WATER
C	BURIED CABLE
G	BURIED GAS
UT	BURIED TEL
OHE	OH ELEC
OE/OT/CTV	OH ELEC/OH TEL/OH CBL
X	EXIST FENCE
	EXIST TREE
WM	WATER METER
	WATER VALVE
	TELE PEDESTAL
	LIGHT POLE
	POWER POLE
	GUY WIRE
	SIGN
	MAIL BOX
S	SANITARY SEWER
MH	STORM DRAINAGE
	CLEAN OUT
	FIRE HYDRANT
T	AT&T
	PROP CONC TRAIL
	100-YEAR FLOODPLAIN
	CONSTRUCTION AREA
	TEMPORARY FLEX BASE

1

NO.	DESCRIPTION	BY	DATE
1	REVISION FOR CONSTRUCTION	RZ	01/21/2026

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LEONVALLEY

Texas Department of Transportation

HUEBNER CREEK GREENWAY
HIKE AND BIKE TRAIL
CITY OF LEON VALLEY

CONSTRUCTION PHASE LAYOUT STA 47+00 TO END

HORIZ. SCALE: 1"=100'

FED.RD. DIV.NO.	FEDERAL AID PROJECT		SHEET NO.
6	2B25(182)		19
STATE	DIST.	COUNTY	
TEXAS	SAT	BEXAR	
CONT.	SECT.	JOB	HIGHWAY NO.
0915	12	735	SH16

Plotted by: rgallegos
1/27/2026
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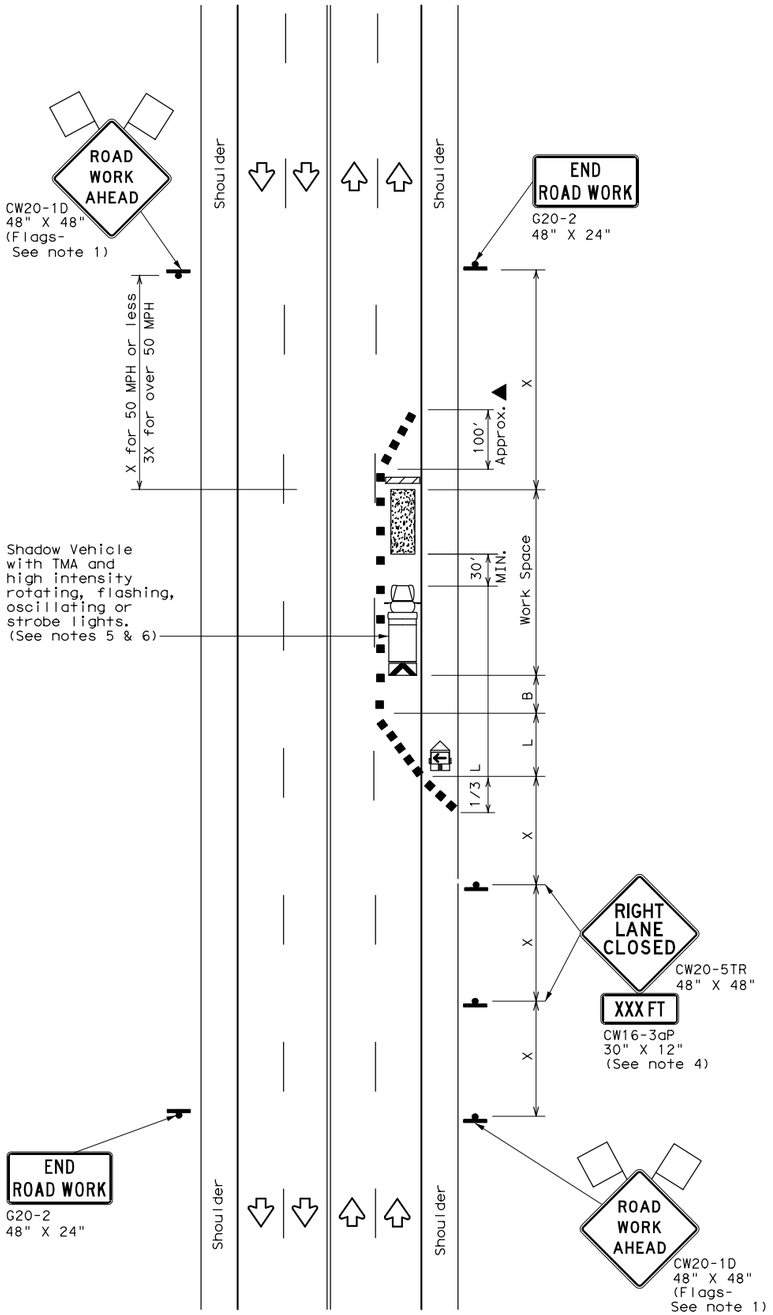
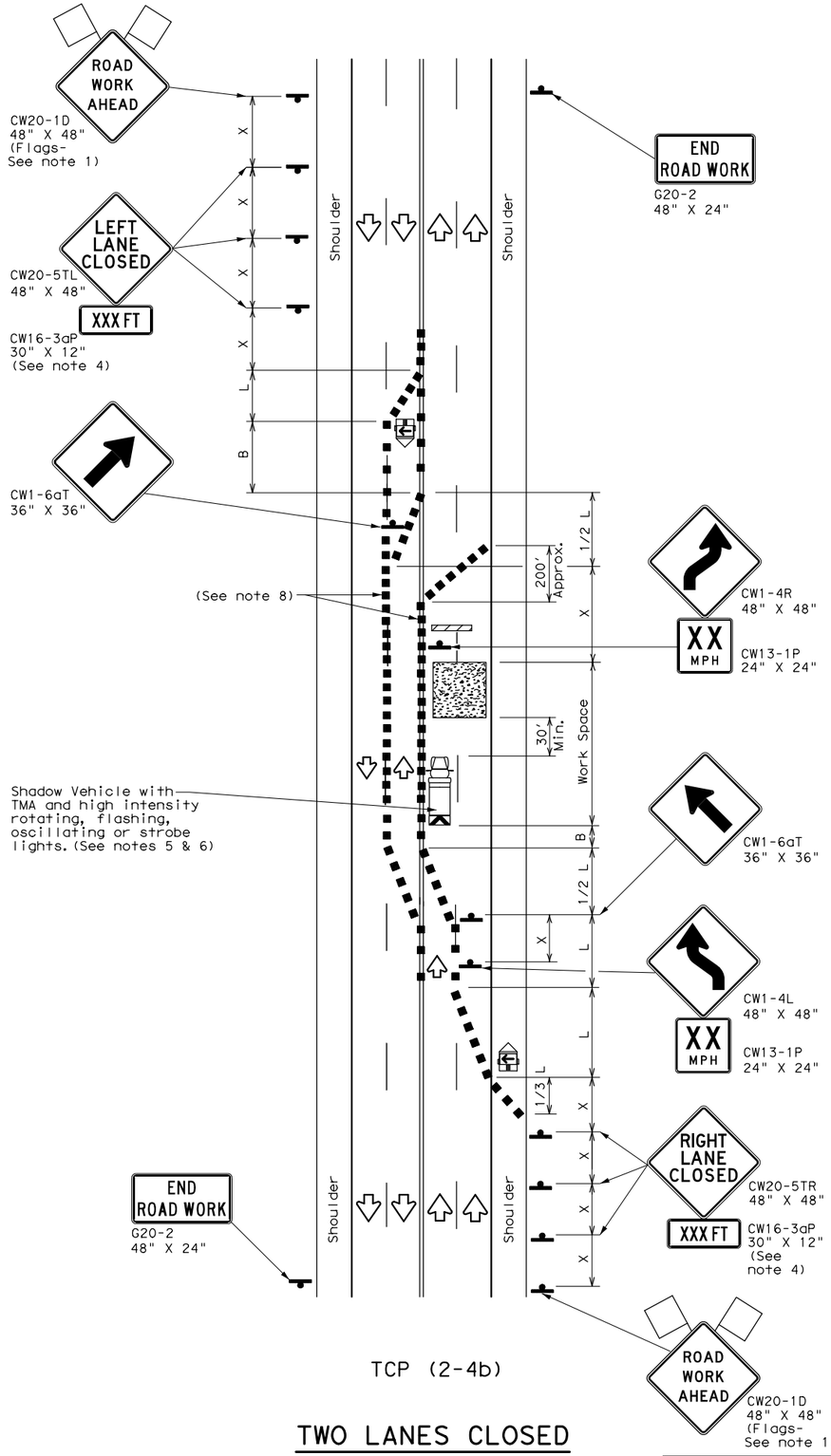
DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

DATE:
FILE:



TCP (2-4a)

ONE LANE CLOSED



TCP (2-4b)

TWO LANES CLOSED

LEGEND			
	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board	M	Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

Posted Speed *	Formula	Minimum Desirable Taper Lengths ** 10′ Offset	11′ Offset	12′ Offset	Suggested Maximum Spacing of Channelizing Devices: On a Taper	On a Tangent	Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"
30	$L=\frac{WS^2}{60}$	150′	165′	180′	30′	60′	120′	90′
35		205′	225′	245′	35′	70′	160′	120′
40		265′	295′	320′	40′	80′	240′	155′
45	L=WS	450′	495′	540′	45′	90′	320′	195′
50		500′	550′	600′	50′	100′	400′	240′
55		550′	605′	660′	55′	110′	500′	295′
60		600′	660′	720′	60′	120′	600′	350′
65		650′	715′	780′	65′	130′	700′	410′
70		700′	770′	840′	70′	140′	800′	475′
75		750′	825′	900′	75′	150′	900′	540′

* Conventional Roads Only

** Taper lengths have been rounded off.
L=Length of Taper(FT) W=Width of Offset(FT) S=Posted Speed(MPH)

TYPICAL USAGE				
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
		✓	✓	

GENERAL NOTES

1. Flags attached to signs where shown, are REQUIRED.
2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
3. The downstream taper is optional. When used, it should be 100 feet minimum length per lane.
4. For short term applications, when post mounted signs are not used, the distance legend may be shown on the sign face rather than on a CW16-3aP supplemental plaque.
5. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
6. Additional Shadow Vehicles with TMAs may be positioned in each closed lane, on the shoulder or off the paved surface, next to those shown in order to protect a wider work space.

TCP (2-4a)

7. If this TCP is used for a left lane closure, CW20-5TL "LEFT LANE CLOSED"signs shall be used and channelizing devices shall be placed on the centerline to protect the work space from opposing traffic with the arrow board placed in the closed lane near the end of the merging taper.

TCP (2-4b)

8. For shorter durations where traffic is directed over a yellow centerline, channelizing devices which separate two-way traffic should be spaced on tapers at 20′ or 15′ if posted speeds are 35 mph or slower, and for tangent sections, at 1/2(S) where S is the speed in mph. This tighter devices spacing is intended for the area of conflicting markings, not the entire work zone.

NO.	DESCRIPTION	BY	DATE
1	NEW SHEET	RZ	01/21/2026

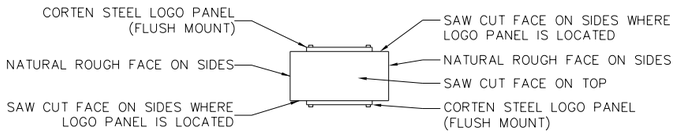
Texas Department of Transportation

Traffic Operations Division Standard

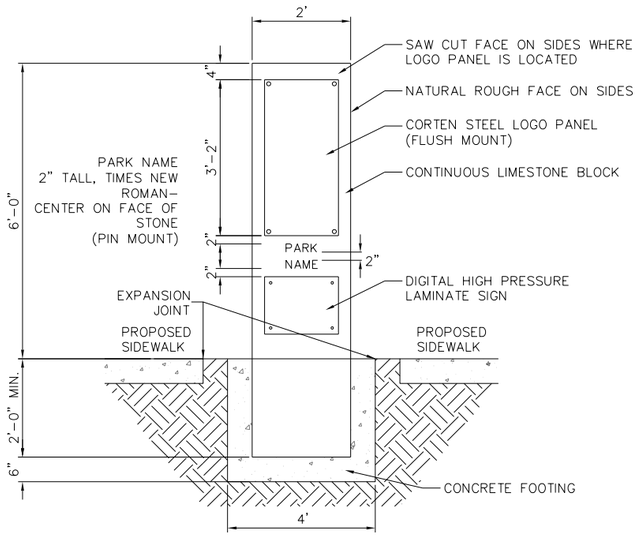
TRAFFIC CONTROL PLAN LANE CLOSURES ON MULTILANE CONVENTIONAL ROADS

TCP(2-4)-18

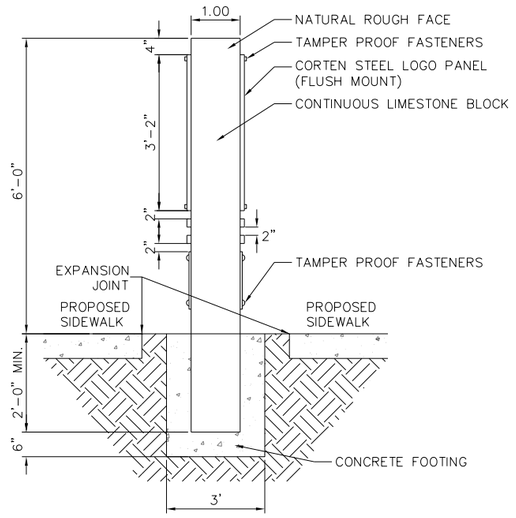
FILE: tcp2-4-18.dgn	DN:	CK:	DW:	CK:
©TxDOT December 1985	CONT	SECT	JOB	HIGHWAY
REVISIONS 8-95 3-03				
1-97 2-12	DIST	COUNTY		SHEET NO.
4-98 2-18				31a



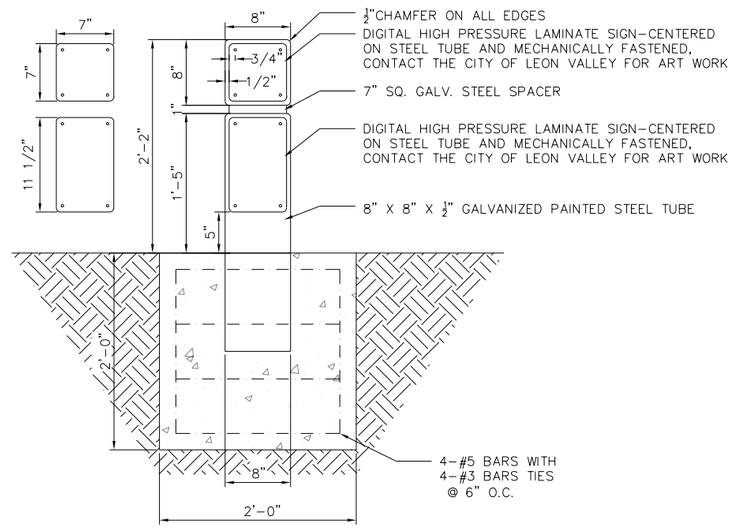
NOTE:
1. LIMESTONE COLOURS–
   1.A. NATURAL ROUGH FACE–"RUST"
   WITH MINOR AMOUNTS OF "CREAM"
   1.B. SAW CUT FACE–"CREAM"
2. LIMESTONE SAMPLE TO BE APPROVED BY THE OWNER PRIOR TO CONSTRUCTION

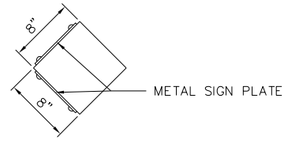


MONUMENT – FRONT ELEVATION



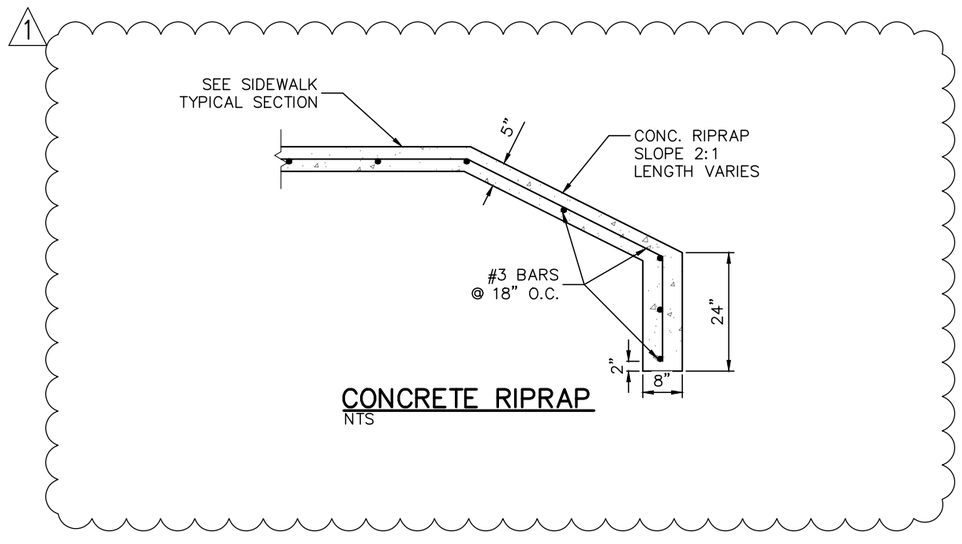
MONUMENT – SIDE ELEVATION





DIRECTION MONUMENT
NTS

TRAILHEAD SIGN
NTS



CONCRETE RIPRAP
NTS

NO.	DESCRIPTION	BY	DATE
1	REVISION FOR CONSTRUCTION	RZ	01/21/2026

RICARDO J ZAMORA
94752
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R.J.Z. P.E.

01/27/2026

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LEONVALLEY

Texas Department of Transportation

HUEBNER CREEK GREENWAY
HIKE AND BIKE TRAIL
CITY OF LEON VALLEY

TRAIL DETAILS

SCALE: N.T.S.

FED.RD. DIV.NO.	FEDERAL AID PROJECT		SHEET NO.
6	2B25(182)		42
STATE	DIST.	COUNTY	
TEXAS	SAT	BEXAR	
CONT.	SECT.	JOB	HIGHWAY NO.
0915	12	735	SH16

Note To Designer:
1. Do not alter Sheet Design or Font style, size or weight - match text attributes.
2. If additional space is needed for a numbered section, fence and adjust sections up or down as needed for proportioning and readability but do not relocate from it's relative position.

A. GENERAL SITE DATA

1. PROJECT LIMITS: *Same as stated on the Title Sheet*

2. PROJECT SITE MAPS:

- * *Project Latitude 29°29'16.50" N Project Longitude 98°37'10.94" W*
- * *Project Location Map: Shown on Title Sheet*
- * *Drainage Patterns: Project Area Drains to Huebner Creek*
- * *Approx. Slopes Anticipated After Major Gradings and Areas of Soil Disturbance: Shown on Typical Sections*
- * *Major Controls and Locations of Stabilization Practices: Shown on SW3P Sheets*
- * *Project Specific Locations: Off-site waste, borrow, or storage areas are not part of this SW3P.*
- * *Surface Waters and Discharge Locations: Shown on Trail and Culvert Layout Sheets*

3. PROJECT DESCRIPTION: *Same description as stated on Title Sheet*

- * *Joint-bid utilities are covered by this SW3P*
  Non-Joint Bid Utilities are not part of this SW3P.

4. FOR MAJOR SOIL DISTURBING ACTIVITIES SEQUENCE OF EVENTS:

1. *Install controls down-slope of work area and initiate inspection and maintenance activities.*
2. *Begin phased construction with interim stabilization practices. Adjust erosion and sedimentation controls during construction to meet requirements and changing conditions and as directed/approved by the Engineer.*
3. *Major soil disturbing activities may include but are not limited to: right-of-way preparation, cut and/or fill to improve roadway profile, final grading and placement of topsoil and the following (if marked):*

   _X_ *Placement of road base*
   _X_ *Exstensive trail grading*
   _X_ *Upgrading or replacing culverts or bridges*
   ___ *Temporary detour road(s)*
   ___ *Other: _____*

5. EXISTING AND PROPOSED CONDITIONS:

Description of existing vegetative cover: Weeds and Natural Vegetation
Percentage of existing vegetative cover: 50%
Existing vegetative cover: (mark one)
___ *Thick or uniformly established*
_X_ *Thin and Patchy*
___ *None or minimal cover*

Description of soils: Low to moderate expansive soils based on moderate degree of plasticity and the majority are classified as Clayey Sand (SC) per the Unified Soil Classification System (USCS).

Site Acreage: 12.29 *Acreage disturbed: 3.087*
Site runoff coefficient (pre-construction): .60 *Site runoff coefficient (post-construction): .60*

6. RECEIVING WATERS: *(Mark all that apply)*

___ *A classified stream does not pass through project.*
___ *A classified stream passes through project. Name _____ Segment Number _____*

Name of receiving waters that will receive discharges from disturbed areas of the project: HUEBNER CREEK

Site is in a Municipal Separate Storm Sewer System (MS4).
MS4 Operator (name): City of Leon Valley

B. BEST MANAGEMENT PRACTICES

General timing or sequence for implementation of BMPs shall be as required and/or as directed/approved by the Engineer to provide adequate controls. BMPs shown on plan sheets are to be considered "proposed" unless/until install date is shown. BMPs are to reduce sediments from road construction activities.

1. SOIL STABILIZATION PRACTICES: (Select T = Temporary or P = Permanent, as applicable)

1	_P_	SEEDING	___ PRESERVATION OF NATURAL RESOURCES
	___	MULCHING (Hay or Straw)	___ FLEXIBLE CHANNEL LINER
	___	BUFFER ZONES	___ RIGID CHANNEL LINER
	___	PLANTING	___ SOIL RETENTION BLANKET
	___	COMPOST/MULCH FILTER BERM	___ COMPOST MANUFACTURED TOPSOIL
	___	SODDING	___ OTHER: (Specify Practice)

2. STRUCTURAL PRACTICES: (Select T = Temporary or P = Permanent, as applicable)

_T_ SILT FENCES
___ HAY BALES
_T_ ROCK FILTER DAMS
___ DIVERSION, INTERCEPTOR, OR PERIMETER DIKES
___ DIVERSION, INTERCEPTOR, OR PERIMETER SWALES
___ DIVERSION DIKE AND SWALE COMBINATIONS
___ PIPE SLOPE DRAINS
___ PAVED FLUMES
_T_ ROCK BEDDING AT CONSTRUCTION EXIT
___ TIMBER MATTING AT CONSTRUCTION EXIT
___ CHANNEL LINERS
___ SEDIMENT TRAPS
___ SEDIMENT BASINS
___ STORM INLET SEDIMENT TRAP
___ STONE OUTLET STRUCTURES
___ CURBS AND GUTTERS
___ STORM SEWERS
___ VELOCITY CONTROL DEVICES
___ OTHER: *(Specify Practice)*

3. STORM WATER MANAGEMENT:

The proposed facility was designed in consideration of hydraulic design standards to convey stormwater in a manner that is protective of public safety and property. The control of erosion from the facility is inherent to the design. Additional factors affecting post-construction stormwater at the project location include: (mark all that apply)

_X_ *Existing or new vegetation provides natural filtration.*
___ *The design includes provisions for permanent erosion controls provided by strategically placed pervious and impervious surfaces.*
___ *Project includes permanent sedimentation controls (other than grass).*
_X_ *Velocities do not require dissipation devices.*
___ *Velocity-dissipation devices included in the design.*
___ *Other : _____*

4. NON-STORM WATER DISCHARGES:

Off-site discharges are prohibited except as follows:

1. *Discharges from fire fighting activities and/or fire hydrant flushings.*
2. *Vehicle, external building, and pavement wash water where detergents and soaps are not used and where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed).*
3. *Plain water used to control dust.*
4. *Plain water originating from potable water sources.*
5. *Uncontaminated groundwater, spring water or accumulated stormwater.*
6. *Foundation or footing drains where flows are not contaminated with process materials such as solvents.*
7. *Other: _____*

Concrete truck wash water discharges on the site should be prohibited or minimized. If allowed by the Engineer, they must be managed in a manner so as not to contaminate surface water. They must not be located in areas of concentrated flow. Concrete truck wash-out locations must be shown on the SW3P Layout and included in the inspections.

Hazardous material spill/leak shall be prevented or minimized. At a minimum, this includes asphalt products, fuels, oils, lubricants, solvents, paints, acids, concrete curing compounds and chemical additives for soil stabilization. BMPs shall be implemented to the storage areas of these products. All spills must be cleaned and disposed properly and reported to the Engineer. Report any release at or above the reportable quantity during a 24 hour period to the National Response Center at 1-800-424-8802.

C. OTHER REQUIREMENTS & PRACTICES

1. MAINTENANCE:

All erosion and sediment controls shall be maintained in good working order. If a repair is necessary, it shall be performed before the next anticipated storm event but no later than 7 calendar days after the surrounding exposed ground has dried sufficiently to prevent further damage from equipment. If maintenance prior to the next anticipated storm event is impracticable, maintenance must be scheduled and accomplished as soon as practicable. Disturbed areas on which construction activities have ceased, temporarily or permanently, shall be stabilized within 14 calendar days unless they are scheduled to and do resume within 21 calendar days. The areas adjacent to creeks and drainageways shall have priority followed by protecting storm sewer inlets.

2. INSPECTION:

For areas of the construction site that have not been finally stabilized, areas used for storage of materials, structural control measures, and locations where vehicles enter or exit the site, personnel provided by the permittee and familiar with the SW3P must inspect disturbed areas at least once every seven (7) calendar days. An Inspection and Maintenance Report shall be prepared for each inspection and the controls shall be revised on the SW3P within seven (7) calendar days following the inspection.

3. WASTE MATERIALS:

All non-hazardous municipal waste materials such as litter, rubbish, trash and garbage located on or originating from the project shall be collected and stored in a securely lidded metal dumpster, provided by the Contractor. The dumpster shall be emptied as necessary or as required by local regulation and the trash shall be hauled to a permitted disposal facility. The burying of non-hazardous municipal waste on the project shall not be permitted. Construction material waste sites, stockpiles and haul roads shall be constructed to minimize and control the amount of sediment that may enter receiving waters. Construction material waste sites shall not be located in any wetland, water body or stream bed. Construction staging areas and vehicle maintenance areas shall be constructed in a manner to minimize the runoff of pollutants.

4. OFFSITE VEHICLE TRACKING:

Off-site vehicle tracking of sediments and the generation of dust must be minimized. Excess sediments on road shall be removed on a regular basis as directed/approved by the Engineer.

5. OTHER:

See the EPIC sheet for additional environmental information.

NO.	DESCRIPTION	BY	DATE
1	REVISION FOR CONSTRUCTION	RZ	01/21/2026

8918 Tesoro Dr., Suite 401
San Antonio, Texas 78217
Phone: (210) 822-2232
www.Ardurra.com
Engineering License #F-10053
Ardurra Group, Inc. (dba LNV, LLC)
Surveying Firm 10126502
ARDURRA
COLLABORATE. INNOVATE. CREATE.

LEONVALLEY

STATE OF TEXAS
RICARDO J ZAMORA
94752
LICENSED
PROFESSIONAL ENGINEER

01/27/2026
, P.E.
Signature of Registrant & Date

REVISION DATE: 01/21/2026

STORM WATER POLLUTION PREVENTION PLAN (SW3P)

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
6			SH16
STATE	DISTRICT	COUNTY	
TEXAS	SAT	BEXAR	
CONTROL	SECTION	JOB	SHEET NO.
0915	12	735	55

ROCK ENGINEERING AND TESTING LABORATORY, LLC
A UES COMPANY

- GEOTECHNICAL ENGINEERING
- CONSTRUCTION MATERIALS ENGINEERING & TESTING
- SOILS • ASPHALT • CONCRETE

March 5, 2024

Ardurra Group, Inc.
8918 Tesoro Drive, Suite 401
San Antonio, Texas 78217

Attention: Byron Sanderfer, P.E.

SUBJECT: SUBSURFACE EXPLORATION, LABORATORY TESTING PROGRAM AND GEOTECHNICAL EVALUATION FOR THE PROPOSED PEDESTRIAN BRIDGE HUEBNER CREEK GREENWAY HIKE AND BIKE TRAIL SAN ANTONIO, TEXAS
ROCK Project Number: 24-0062

Dear Mr. Sanderfer,

In accordance with our agreement, Rock Engineering and Testing Laboratory, LLC (ROCK) (TXPE Firm #2101) has conducted a subsurface exploration, laboratory testing program and is providing geotechnical recommendations for the above referenced project. The results of this exploration, together with our recommendations, are to be found in the accompanying report.

Often, because of design and construction details that occur on a project, questions arise concerning soil conditions, and ROCK would be pleased to continue its role as the Geotechnical Engineer during project implementation. If you have any questions, or if we can be of further assistance, please contact our office.

Sincerely,

Kyle D. Hammock, P.E.
Vice President - San Antonio

SUBSURFACE EXPLORATION, LABORATORY TESTING PROGRAM AND GEOTECHNICAL EVALUATION FOR THE PROPOSED PEDESTRIAN BRIDGE HUEBNER CREEK GREENWAY HIKE AND BIKE TRAIL SAN ANTONIO, TEXAS

ROCK PROJECT NUMBER: 24-0062

PREPARED FOR:

ARDURRA GROUP, INC.
8918 TESORO DRIVE, SUITE 401
SAN ANTONIO, TEXAS 78217

MARCH 5, 2024

PREPARED BY:

ROCK ENGINEERING AND TESTING LABORATORY, LLC
10856 VANDALE ST.
SAN ANTONIO, TEXAS 78216
PHONE: (210) 495-8000; FAX: (210) 495-8015

TEXAS BOARD OF PROFESSIONAL ENGINEERS
FIRM REGISTRATION NUMBER 2101

Darren W. Lantz, P.E.
Senior Geotechnical Engineer

Kyle D. Hammock, P.E.
Vice President – San Antonio

ROCK ENGINEERING AND TESTING LABORATORY LLC
A UES COMPANY

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INTRODUCTION

This report presents the results of a subsurface exploration, laboratory testing program and geotechnical evaluation for the proposed Pedestrian Bridge to be constructed as part of the Huebner Creek Greenway Hike and Bike Trail in San Antonio, Texas. This study was conducted for Ardurra Group, Inc.

Authorization

The work for this project was performed in accordance with ROCK Proposal No. SGP040323B dated April 3, 2024. The proposal contained a scope of work, fee, and limitations. The proposal was included as an attachment to the Consulting Agreement between Ardurra Group, Inc. and ROCK, and is dated January 16, 2024.

Purpose and Scope

The purpose of this exploration was to identify and evaluate the soil and groundwater conditions at the site and to provide subsurface information and drilled shaft recommendations suitable for the proposed project.

The scope of the exploration and analysis included the subsurface exploration, field and laboratory testing, TxDOT Cone Penetrometer testing, performing engineering analysis and evaluation of the subsurface soils, provision of drilled shaft recommendations for the proposed pedestrian bridge including LPILE parameters and TxDOT Wincore drilled shaft capacity curves, and preparation of this report.

The scope of services did not include an environmental assessment. Any statements in this report, or on the test hole logs, regarding odors, colors, unusual or suspicious items or conditions are strictly for the information of the client.

General

The exploration and analysis of the subsurface conditions reported herein are considered sufficient in detail and scope to form a reasonable basis for the bridge foundation design. The recommendations submitted for the proposed project are based on the available subsurface information and the preliminary design details provided by Ardurra Group, Inc.

The Geotechnical Engineer warrants that the findings, recommendations, specifications, or professional advice contained herein, have been presented after being prepared in accordance with generally accepted professional engineering practice in the fields of soil mechanics and engineering geology. ROCK operates in general accordance with "*Standard Practice for Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of soil and rock as Used in Engineering Design and Construction*", (ASTM D3740) and is AASHTO certified in various soil testing applications. No other representations are expressed or implied, and no warranty or guarantee is included or intended.

This report has been prepared for the exclusive use of Ardurra Group, Inc., for the specific application to the proposed Pedestrian Bridge to be constructed as part of the Huebner Creek Greenway Hike and Bike Trail in San Antonio, Texas.

FIELD EXPLORATION

Scope

The field exploration to identify the engineering characteristics of the subsurface soils included a reconnaissance of the project site, performing the test holes, obtaining samples of the subsurface materials, and performing TxDOT cone penetrometer tests. The geotechnical drilling operations were performed in general accordance with the TxDOT Geotechnical Manual.

A total of two (2) test holes were completed at the site, with one (1) test hole located at each abutment location. The table below provides test hole information including test hole number, general location, elevation, GPS coordinates, and the test hole depth:

TEST HOLE INFORMATION				
Test Hole No.	**Location**	**Approximate Elevation (ft)**	**GPS Coordinates**	**Hole Depth (ft)**
1	West Abutment	822.23	29.49596°, -98.61279°	30
2	East Abutment	823.35	29.49572°, -98.61253°	30

Ardurra Group, Inc. determined the location of the test holes. The drilling operations were performed by ROCK and upon completion of the drilling operations and obtaining the groundwater observations, the test holes were backfilled with excavated materials.

During the sample recovery operations, the soils encountered were visually classified and recorded on test hole logs in accordance with the "*Standard Guide for Field Logging of Subsurface Exploration Soil and Rock*", (ASTM D5434).

Drilling and Sampling Procedures

The test holes were performed using a drilling rig equipped with a rotary head and solid flight augers were used to advance the test holes to the termination depths. Disturbed soil samples were obtained employing split-barrel sampling procedures using a modified version of the "*Penetration Test and Split-Barrel Sampling of Soils*" (ASTM D1586) as discussed in forthcoming sections of this report. Relatively undisturbed soil samples were obtained using thin-wall tube sampling procedures in general accordance with the procedures for "*Thin Walled Tube Sampling of Soils*" (ASTM D1587). The samples obtained by this procedure were extruded by a hydraulic ram in the field.

The samples obtained from the test holes were classified in the field, placed in plastic bags, marked according to boring number, depth and any other pertinent field data, and stored in special containers. The samples were delivered to the laboratory for testing at the completion of the drilling operations.

Field Test and Measurements

Texas Cone Penetrometer Tests - During the augering procedures, TxDOT Texas Cone Penetrometer Tests (TCP) were performed to obtain the relative density or consistency of the soil. The TCP test is performed by attaching a 3-inch diameter cone to the end of the drill stem and lowering it to the bottom of the drill hole. The anvil at the top of the drill stem is attached to a 170-pound hammer which dropped a regulated 2-feet distance. The cone is initially driven 12 blows to seat the cone. The number of blows is recorded for each of two successive 6-inch penetrations. In hard or dense materials, the penetrometer is driven with the resulting penetration in inches recorded for the first and second 50 blows. In either case, the cone is driven 6-inches or 50 blows for each increment.

Modified Standard Penetration Tests - During the sampling procedures, modified standard penetration tests were performed. The standard penetration test (SPT) is typically performed to obtain the standard penetration value of the soil and to collect soil sample for observation and laboratory testing. The standard penetration value (N) is defined as the number of blows of a 140-pound hammer, falling 30-inches, required to advance the split-barrel sampler 1-foot into the soil. The sampler is lowered to the bottom of the previously cleaned drill hole and advanced by blows from the hammer. The numbers of blows are recorded for each of three successive 6-inch penetrations. The “N” value is obtained by adding the second and third 6-inch increment number of blows. The results of standard penetration tests indicate the relative density of cohesionless soils and comparative consistency of cohesive soils, thereby providing a basis for estimating the relative strength and compressibility of the soil profile.

The modified standard penetration tests performed during this study consisted of the same procedure as described above; however, a 170-pound hammer falling 24-inches was used. Although this results in similar energy, it is not in strict accordance with the SPT procedure. Therefore, the obtained penetration value (N), although recorded on the test hole logs, was not used for strength determination or the recommendations provided herein. Rather, modified standard penetration test procedures were used for the sole purpose of collecting samples of the subsurface materials.

Water Level Observations - Water level observations were obtained during the test hole operations and are noted on the drilling logs provided in the Appendix. The amount of water in open test holes largely depends on the permeability of the soils encountered at the test hole locations. In relatively pervious soils, such as sandy soils, the indicated depths are usually reliable groundwater levels. In relatively impervious soils, a suitable estimate of the groundwater depth may not be possible, even after several days of observation. Seasonal variations, temperature, land-use, proximity to a creek, river or lake and recent rainfall conditions may influence the depth to the groundwater.

Ground Surface Elevations - The surface elevations at the test hole locations were provided by Ardurra Group, Inc. All depths referred to in this report are from the ground surface elevations at the test hole locations during the time of our field investigation and all elevations referenced in this report are based on the provided elevations at the test hole locations.

LABORATORY TESTING PROGRAM

In addition to the field investigation, a laboratory-testing program was conducted to determine additional pertinent engineering characteristics of the subsurface materials necessary in developing the geotechnical recommendations.

The laboratory-testing program included supplementary visual classification (ASTM D2487) on all samples. In addition, selected samples were subjected to water content tests (ASTM D2216), Atterberg limits tests (ASTM D4318), and percent material finer than the #200 sieve tests (ASTM D1140).

All phases of the laboratory-testing program were conducted in general accordance with applicable ASTM or TxDOT Specifications. The results of these tests are to be found in this report or on the accompanying drilling logs provided in the Appendix.

SUBSURFACE CONDITIONS

General

The types of subsurface materials encountered in the test holes have been visually classified and are described on the TxDOT WINCORE drilling logs. The results of the TCP tests, water level observations, and laboratory tests are presented on the drilling logs. Representative samples of the soils were placed in polyethylene bags and are now stored in the laboratory for further analysis, if desired. Unless notified to the contrary, the samples will be disposed of three (3) months after issuance of this report.

The stratification of the soils, as shown on the drilling logs, represents the conditions at the actual test hole locations. Variations may occur between, or beyond, the test hole locations. Lines of demarcation represent the approximate boundary between different soil types, but the transition may be gradual, or not clearly defined.

It should be noted that, whereas the test holes were drilled and sampled by experienced drillers, it is sometimes difficult to record changes in stratification within narrow limits. In the absence of foreign substances, it is also difficult to distinguish between discolored soils and clean soil fill.

Generalized Soil Conditions

With the exception of a lean clay stratum between the approximate depths of 6 and 8½-feet in test hole 1 (west abutment) and approximately 18-inches of gravel fill materials at the surface in test hole 2 (east abutment), the subsurface conditions encountered at the test hole locations generally consist of fat clay throughout the approximate 30-feet exploration depths of the borings. The fat clay soils are high in plasticity with Plasticity Index (PI) values ranging from 37 to 54. The fat clay soils generally become hard to very hard and marly below approximate depths of 9-feet and 18-feet in test holes 1 and 2, respectively.

Groundwater Observations

Groundwater (GW) was encountered during the drilling process at a depth of approximately 5-feet in test hole 1 (west abutment) and was not encountered during drilling operations in test hole 2 (east abutment). Upon completion of the drilling operations, both test holes were observed to be open and dry. It is therefore likely that the groundwater encountered in test hole 1 was perched groundwater.

Water levels in open test holes may require several hours to several days to stabilize depending on the permeability of the subsurface materials and that groundwater levels or zones of seepage may be subject to seasonal conditions, recent rainfall, drought or temperature effects.

GEOTECHNICAL RECOMMENDATIONS

Project Description

Based on the information provided to ROCK, it is understood that a new pedestrian bridge will be constructed. The bridge will be designed in accordance with TxDOT guidelines. The estimated vertical/axial load for each shaft is approximately 50-kips. The estimated lateral/shear load for the shafts was not provided.

Drilled Shaft Design

The structural engineer can utilize the TxDOT WINCORE “Foundation Capacity” curves provided in the Appendix to estimate the design capacity of the abutment and bent drilled shafts. Capacity curves for 18 and 24-inch drilled shafts are provided and include a safety factor of at least 2.0. A disregard depth of 10-feet, as measured from the existing surface elevations at the test hole locations, has been used. The drilled shafts should be spaced no closer than three diameters apart measured center to center.

The drilled shaft capacity and drilled shaft tip elevations provided on the foundation capacity curves are summarized in the following table.

18-INCH DRILLED SHAFTS DESIGN				
Test Hole No.	**Location**	**Diameter**	**Capacity**	**Tip Elevation**
1	West Abutment	18”	50 kips (25 tons)	810.23’
2	East Abutment	18”	50 kips (25 tons)	807.85’

24-INCH DRILLED SHAFTS DESIGN				
Test Hole No.	**Location**	**Diameter**	**Capacity**	**Tip Elevation**
1	West Abutment	24”	50 kips (25 tons)	810.23’
2	East Abutment	24”	50 kips (5 tons)	809.35’

The manual Drilled Shafts: Construction Procedures and Design Methods suggests that drilled shafts be reinforced throughout their length with a minimum of 1-percent longitudinal reinforcing steel by cross sectional area of the shaft. The referenced document states that some reduction in the percentage of longitudinal reinforcing steel may be acceptable if the cross-sectional area of the shaft is larger than required due to loading conditions. However, a minimum ¾-percent reinforcing steel by cross sectional area is suggested in the manual even if the cross-sectional area of the shaft is more than twice that required due to loading conditions.

Temporary steel casing or drilling mud slurry, or a combination of both, may be required to successfully install the drilled shafts at this site to control sloughing of the upper soils and groundwater inflow especially after a rain event. If the piers are drilled during dry weather, casing or slurry may not be required.

Concrete should be placed as soon as possible after all loose material has been removed, the shaft excavation inspected and reinforcing steel installed. A relatively high slump concrete mix (6 to 8-inches) is suggested to minimize aggregate segregation caused by the reinforcing steel. The concrete should be placed with a tremie.

The successful placement of a drilled shaft foundation system is dependent on the expertise of the drilled shaft foundation contractor. The drilled shaft contractor should expect groundwater infiltration, soil and gravel sloughing problems, and very hard limestone rock on this project.

Lateral Pier Analysis

The lateral pier analysis program L-pile will require the following parameters for this site:

LATERAL PIER ANALYSIS PARAMETERS						
D	**Description**	**C**	**ϕ**	**γ_e**	**K_s**	**E_{50}**
0-5	**CLAY**	Neglect				
5-10	**CLAY**	2,000	0	120	500	0.007
10-20	**CLAY**	3,000	0	120	1,000	0.005
20-30	**CLAY**	5,000	0	120	2,000	0.004

Where: D = Depth Below Existing Grade, feet
γ_e = Effective Unit Weight, pcf
C = Shear Strength, psf
ϕ = Angle of Internal Friction, deg.
K_s = Modulus of Subgrade Reaction (pci) static
E_{50} = 50% Strain Value

K_s and E_{50} values were estimated from known correlations.

GENERAL COMMENTS

If there are any revisions to the plans for the proposed project, or if deviations from the subsurface conditions noted in this report are encountered during construction, ROCK should be retained to determine if changes in the recommendations are required. If ROCK is not retained to perform these functions, ROCK will not be responsible for the impact of those conditions on the performance of the project.

It is recommended that the services of ROCK be retained to provide observation and testing during the construction of the project in order to verify that the subsurface materials are consistent with those encountered in the test holes. ROCK cannot accept any responsibility for any conditions that deviate from those described in this report, nor for the performance of the foundations if not engaged to also provide construction observation and testing. If it is required for ROCK to accept any liability, then ROCK must agree with the plans and perform such observation during construction as we recommend.

All sheeting, shoring, and bracing of trenches, pits and excavations should be made the responsibility of the contractor and should comply with all current and applicable local, state and federal safety codes, regulations and practices, including the Occupational Safety and Health Administration.

APPENDIX

SITE VICINITY MAP

NO SCALE
LOCATION IS APPROXIMATE

March 5, 2024
Ardurra Group, Inc.
ROCK Project No.: 24-0062

PROPOSED PEDESTRIAN BRIDGE
Huebner Creek Greenway Hike and Bike Trail
San Antonio, Texas

ROCK ENGINEERING AND TESTING LABORATORY, LLC
10856 VANDALE STREET
SAN ANTONIO, TEXAS 78216
(210) 495-8000

A UES COMPANY

TEST HOLE LOCATION PLAN

NO SCALE
LOCATIONS ARE APPROXIMATE

March 5, 2024
Ardurra Group, Inc.
ROCK Project No.: 24-0062

PROPOSED PEDESTRIAN BRIDGE
Huebner Creek Greenway Hike and Bike Trail
San Antonio, Texas

ROCK ENGINEERING AND TESTING LABORATORY, LLC
10856 VANDALE STREET
SAN ANTONIO, TEXAS 78216
(210) 495-8000

DRILLING LOG

	County	Bexar	Hole	1	District	San Antonio
WinCore	Highway	Huebner Creek Greenway	Structure	Pedestrian Bridge	Date	2/5/2024
Version 3.3	CSJ	N/A	Station	N/A	Grnd. Elev.	822.23 ft
			Offset	N/A	GW Elev.	817.23 ft

Elev. (ft)	LOG	Texas Cone Penetrometer	Strata Description	Triaxial Test Lateral Press. (psi)	Triaxial Test Deviator Stress (psi)	Properties MC	Properties LL	Properties PI	Properties Wet Den. (pcf)	Additional Remarks
			CLAY, fat, stiff, dark brown to light brown. (CH)			26	57	39		-200#=91%, P=2.0
		10 (6) 12 (6)								
5										
816.2			CLAY, lean with sand, light brown and gray (CL)			11	32	16		-200#=76%, P=4.5+
814.2		50 (4) 50 (3)	CLAY, fat, very hard, marly, light brown and gray (CH)							
10						16				N=44-50/4
		50 (1) 50 (1)								
15						23				N=50/5
		50 (1) 50 (1)								
20						32				N=50/4
		50 (1) 50 (1)								
25						21	62	47		-200#=86%, N=50/4
		50 (1) 50 (1)								
792.2 30										
35										
40										

Remarks: Boring GPS: 29.49596, -98.61279

Any ground water elevation information provided on this boring log is representative of conditions existing on the day and for the specific location where this information was collected. The actual groundwater elevation may fluctuate due to time, climatic conditions, and/or construction activity.

Driller: Xavier Pola **Logger: Jorge Reyes** **Organization: ROCK**

C:\Users\Garrett Ward\OneDrive - TeamUES\Active\SA\SA Geo\ROCK SA Geo Projects\SA GEO 2024\24-0117 Urane Residence Addition\24-0062 Huebner Creek Greenway Hike and Bike Trail\Pedestrian Bridge.CLG

DRILLING LOG

	County	Bexar	Hole	2	District	San Antonio
WinCore	Highway	Huebner Creek Greenway	Structure	Pedestrian Bridge	Date	2/5/2024
Version 3.3	CSJ	N/A	Station	N/A	Grnd. Elev.	823.35 ft
			Offset	N/A	GW Elev.	N/A

Elev. (ft)	LOG	Texas Cone Penetrometer	Strata Description	Triaxial Test Lateral Press. (psi)	Triaxial Test Deviator Stress (psi)	Properties MC	Properties LL	Properties PI	Properties Wet Den. (pcf)	Additional Remarks
821.9			GRAVEL, base fill, light brown			7				N=6
		11 (6) 10 (6)	CLAY, fat, marly 18' to 30', stiff to very hard, dark brown to light brown at 11' (CH)							
5						19				P=2.5
		25 (6) 22 (6)				22	74	54		-200#=89%
10						15				P=4.5+
		29 (6) 44 (6)								
15						17	53	37		-200#=93%, P=3.0
		50 (1) 50 (1)								
20						12				N=90
		50 (4) 50 (5)								
25						14				P=4.5+
		17 (6) 21 (6)								
793.4 30										
35										
40										

Remarks: Boring GPS: 29.49572, -98.61253

The ground water elevation was not determined during the course of this boring.

Driller: Xavier Pola **Logger: Jorge Reyes** **Organization: ROCK**

C:\Users\Garrett Ward\OneDrive - TeamUES\Active\SA\SA Geo\ROCK SA Geo Projects\SA GEO 2024\24-0117 Urane Residence Addition\24-0062 Huebner Creek Greenway Hike and Bike Trail\Pedestrian Bridge.CLG

Rock Engineering & Testing Laboratory, LLC
10856 Vandale Street
San Antonio, TX 78216
Telephone: 210-495-8000

KEY TO SOIL CLASSIFICATION AND SYMBOLS

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS		SYMBOL	NAME
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	GW	Well Graded Gravels or Gravel-Sand mixtures, little or no fines
		GP	Poorly Graded Gravels or Gravel-Sand mixtures, little or no fines
		GM	Silty Gravels, Gravel-Sand-Silt mixtures
		GC	Clayey Gravels, Gravel-Sand-Clay Mixtures
	SAND AND SANDY SOILS	SW	Well Graded Sands or Gravelly Sands, little or no fines
		SP	Poorly Graded Sands or Gravelly Sands, little or no fines
		SM	Silty Sands, Sand-Silt Mixtures
		SC	Clayey Sands, Sand-Clay mixtures
	SILTS AND CLAYS LL < 50	ML	Inorganic Silts and very fine Sands, Rock Flour, Silty or Clayey fine Sands or Clayey Silts
		CL	Inorganic Clays of low to medium plasticity, Gravelly Clays, Sandy Clays, Silty Clays, Lean Clays
		OL	Organic Silts and Organic Silt-Clays of low plasticity
	SILTS AND CLAYS LL > 50	MH	Inorganic Silts, Micaceous or Diatomaceous fine Sandy or Silty soils, Elastic Silts
		CH	Inorganic Clays of high plasticity, Fat Clays
		OH	Organic Clays of medium to high plasticity, Organic Silts
NON USCS MATERIALS			Limestone
			Marl/Claystone
			Sandstone

TERMS CHARACTERIZING SOIL STRUCTURE

SLICKENSIDED - having inclined planes of weakness that are slick and glossy in appearance

FISSURED - containing shrinkage cracks, frequently filled with fine sand or silt; usually more or less vertical

LAMINATED (VARVED) - composed of thin layers of varying color and texture, usually grading from sand or silt at the bottom to clay at the top

CRUMBLY - cohesive soils which break into small blocks or crumbs on drying

CALCAREOUS - containing appreciable quantities of calcium carbonate, generally nodular

WELL GRADED - having wide range in grain sizes and substantial amounts of all intermediate particle sizes

POORLY GRADED - predominantly of one grain size uniformly graded) or having a range of sizes with some intermediate size missing (gap or skip graded)

SYMBOLS FOR TEST DATA

- Groundwater Level (Initial Reading)
- Groundwater Level (Final Reading)
- Shelby Tube Sample
- SPT Samples
- Auger Sample
- Rock Core
- Texas Cone Penetrometer
- Grab Sample

TERMS DESCRIBING CONSISTENCY OF SOIL

COARSE GRAINED SOILS		FINE GRAINED SOILS		
DESCRIPTIVE TERM	NO. BLOWS/FT. STANDARD PEN. TEST	DESCRIPTIVE TERM	NO. BLOWS/FT. STANDARD PEN. TEST	UNCONFINED COMPRESSION TONS PER SQ. FT.
Very Loose	0 - 4	Very Soft	< 2	< 0.25
Loose	4 - 10	Soft	2 - 4	0.25 - 0.50
Medium	10 - 30	Firm	4 - 8	0.50 - 1.00
Dense	30 - 50	Stiff	8 - 15	1.00 - 2.00
Very Dense	over 50	Very Stiff	15 - 30	2.00 - 4.00
		Hard	over 30	over 4.00

Field Classification for "Consistency" of Fine Grained Soils is determined with a 0.25" diameter penetrometer

FOUNDATION CAPACITY

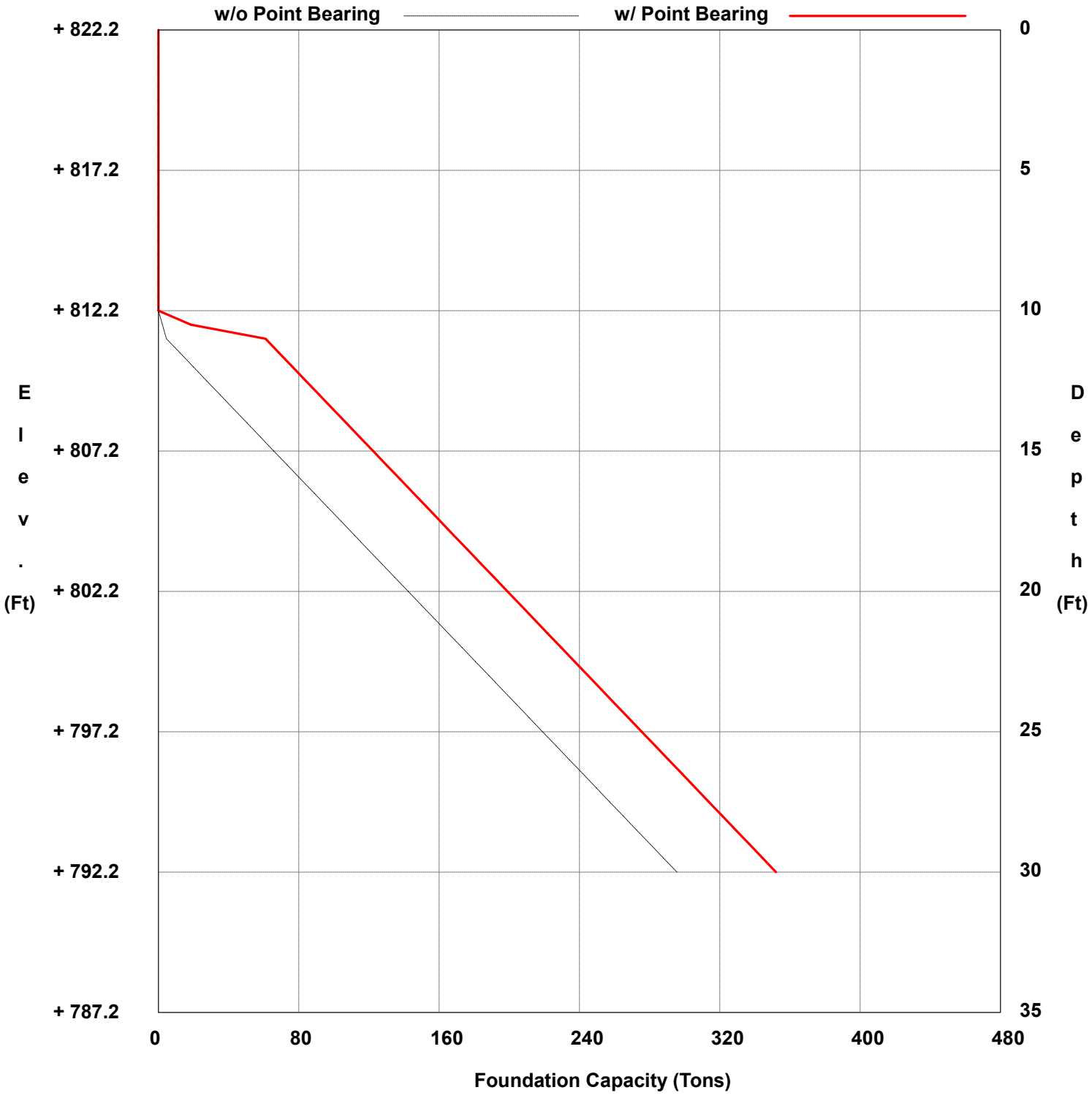
WinCore
Version 3.3

County	Bexar	Hole	1	District	San Antonio
Highway	Huebner Creek Greenway	Structure	Pedestrian Bridge	Date	2/5/2024
Control	N/A	Station	N/A	Grnd. Elev.	822.23 ft
		Offset	N/A	GW Elev.	817.23 ft

18 inch Drilled Shaft
25 ton Design Load
Tip Elevation = + 811.23
(= + 810.23 w/out PB)

+822.23 Top Hole Elevation
+812.23 Disregard Elevation

Disregard above hard strata disabled
Pb: 2 Diameters Below Tip Checked
TCP Capacity Values Used
0.7 Soil Reduction Factor Used



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FOUNDATION CAPACITY

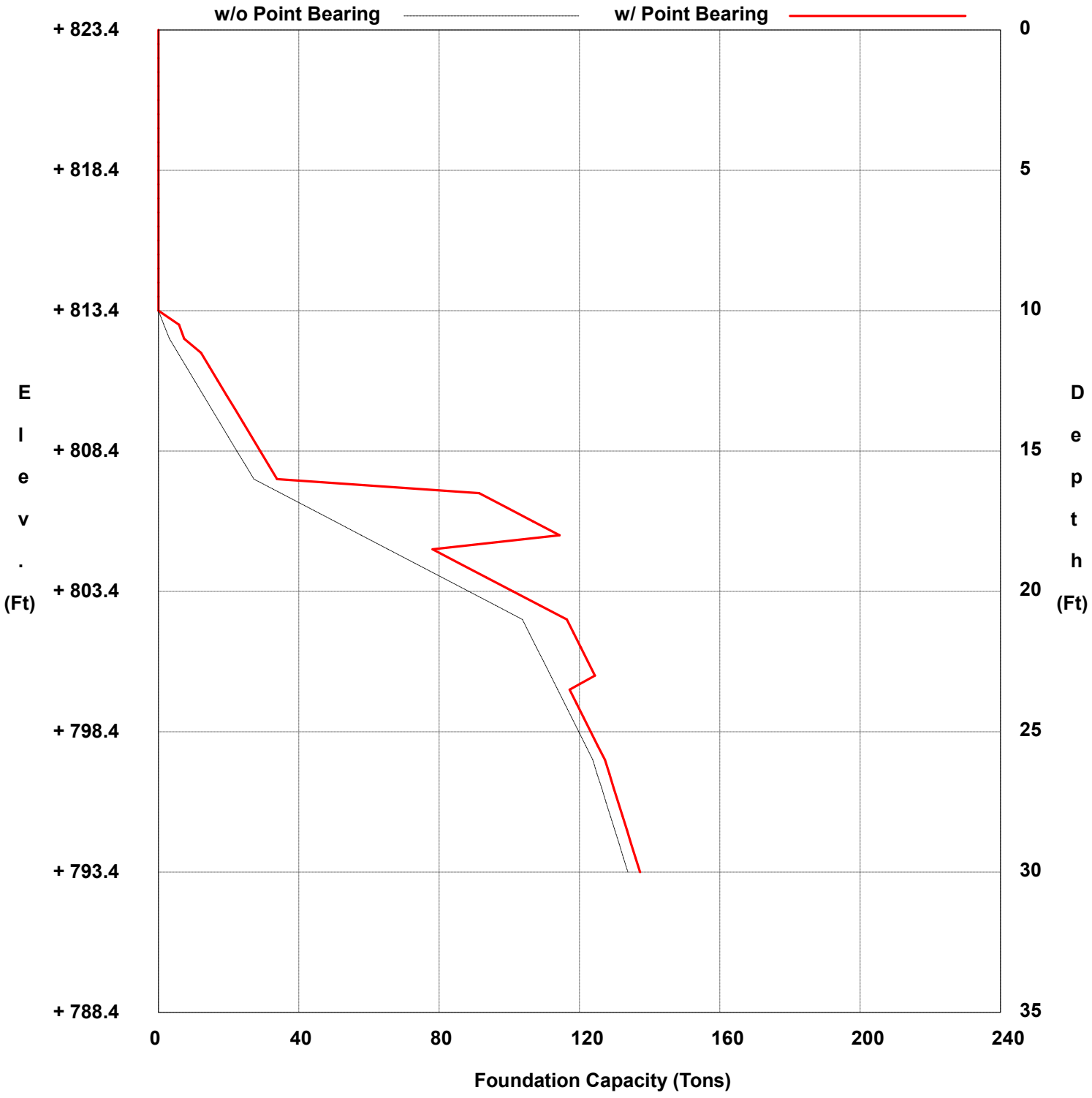
WinCore
Version 3.3

County	Bexar	Hole	2	District	San Antonio
Highway	Huebner Creek Greenway	Structure	Pedestrian Bridge	Date	2/5/2024
Control	N/A	Station	N/A	Grnd. Elev.	823.35 ft
		Offset	N/A	GW Elev.	N/A

18 inch Drilled Shaft
25 ton Design Load
Tip Elevation = + 808.85
(= + 807.85 w/out PB)

+823.35 Top Hole Elevation
+813.35 Disregard Elevation

Disregard above hard strata disabled
Pb: 2 Diameters Below Tip Checked
TCP Capacity Values Used
0.7 Soil Reduction Factor Used



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FOUNDATION CAPACITY

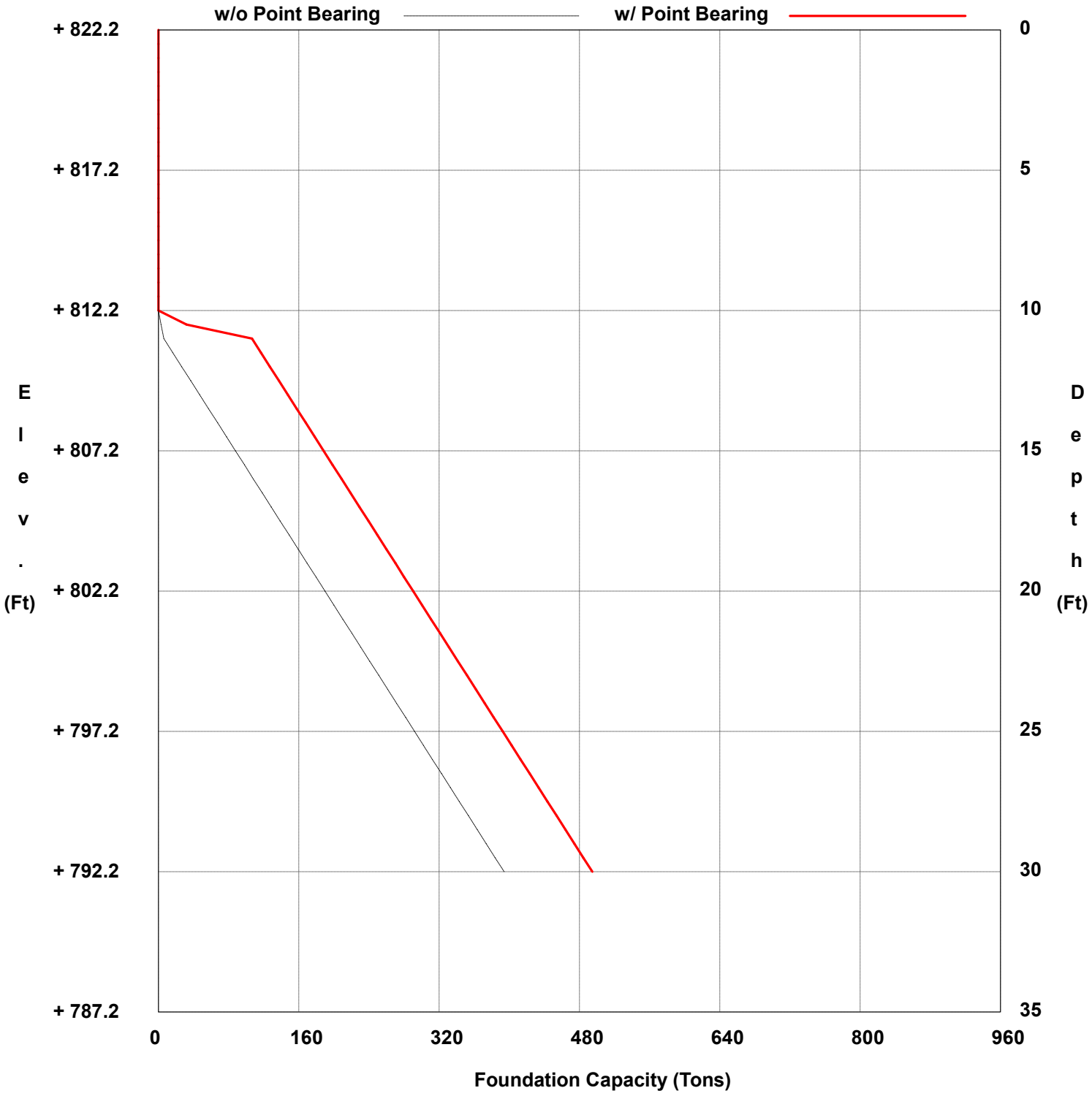
WinCore
Version 3.3

County	Bexar	Hole	1	District	San Antonio
Highway	Huebner Creek Greenway	Structure	Pedestrian Bridge	Date	2/5/2024
Control	N/A	Station	N/A	Grnd. Elev.	822.23 ft
		Offset	N/A	GW Elev.	817.23 ft

24 inch Drilled Shaft
25 ton Design Load
Tip Elevation = + 810.23
(= + 810.23 w/out PB)

+822.23 Top Hole Elevation
+812.23 Disregard Elevation

Disregard above hard strata disabled
Pb: 2 Diameters Below Tip Checked
TCP Capacity Values Used
0.7 Soil Reduction Factor Used



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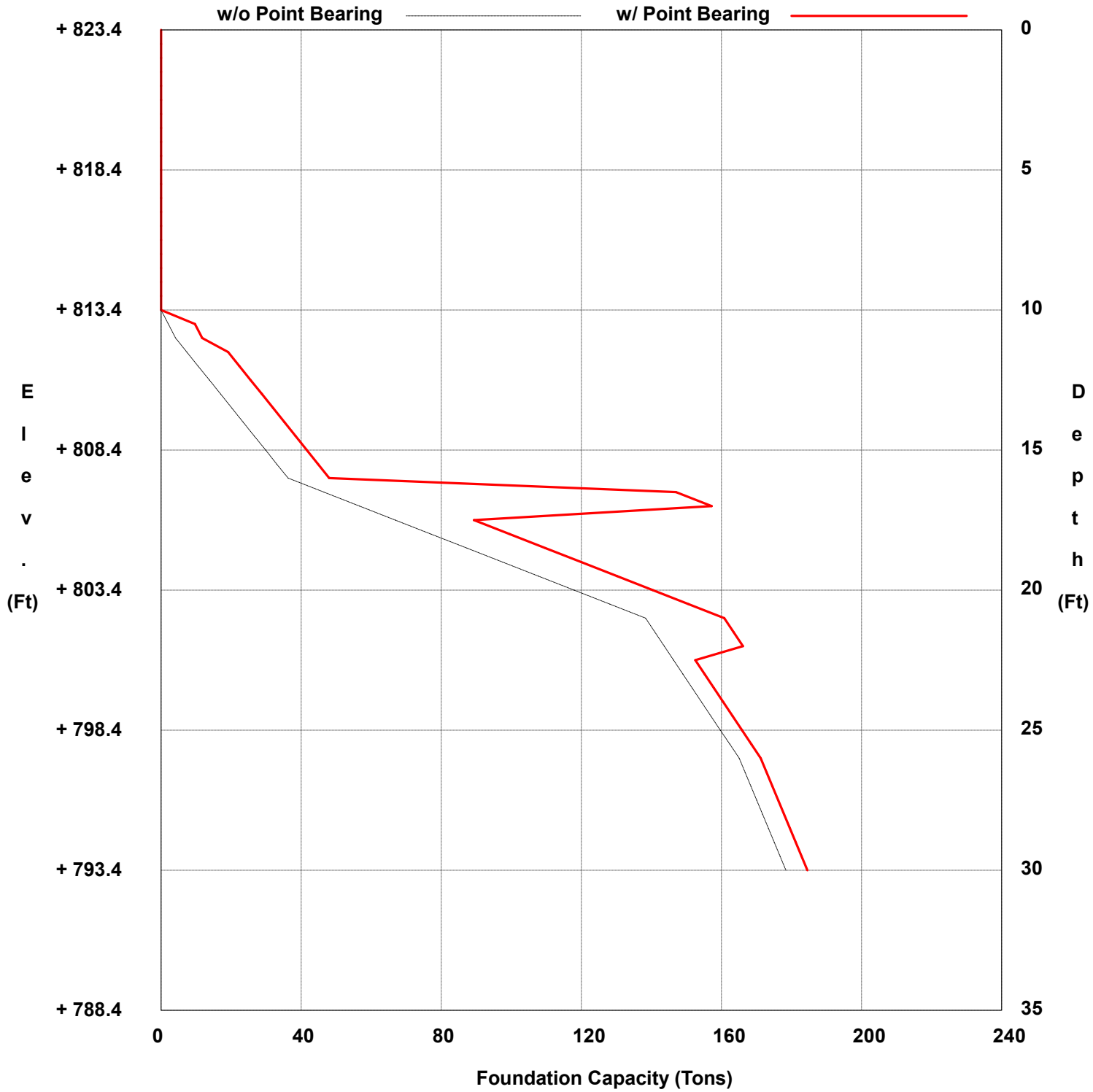

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